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STAN STEPHENS
GOVERNOR

State of Montana
Office of the Governor
Helena, Montana 59620
406-444-3111

To Montana's Public Safety Community:

It is truly my pleasure to present this manual of Mutual Aid and Common Frequencies. Contained within is a wealth of information to help our law enforcement, fire, and other emergency service providers communicate with one another. Beyond just frequency plans, policies, and procedures, this manual offers practical suggestions and conventions to make interagency communications work in all areas of the state, under the worst circumstances, for the benefit of our fellow Montanans.

In 1989, the Public Safety Communications Task Force identified the development of mutual aid radio as its most pressing item of business. With a spirit of cooperative problem-solving evident throughout their work, the Task Force approached this issue with vigor. The contributions of the men and women of that distinguished, inter-governmental group have made this manual possible.

Mutual aid radio is a simple, but vital tool for our public safety community. This manual is your guide for the practical use and application of the seven mutual aid and nine common frequencies available across the state. I hope the information in these pages will help to make Montana a little safer by making the complex job of public safety a little simpler.

Sincerely,

STAN STEPHENS
Governor

WLN 90-193-79

MONTANA PUBLIC SAFETY RADIO

Mutual Aid and Common Frequencies

April 1990

Montana Department of Administration
Public Safety Communications Program

This manual presents the State of Montana Mutual Aid & Common Frequencies Plans as developed in 1990. The plans specify VHF-hi band frequencies for mutual aid and common use in Montana and outline their purposes. Basic policies and procedures, practical applications, and licensing are covered.

Part I covers **general information** on mutual aid and common frequencies.

Part II covers **law enforcement** frequencies and applications.

Part III covers **fire** frequencies and applications.

Part IV covers **emergency medical services** frequencies and applications.

Part V covers **disaster and emergency services** frequencies and applications.

Part VI covers **search and rescue** frequencies and applications.

Part VII covers **management and administrative** information, including contact agencies, interagency agreements, and licensing.

Twelve appendices are included with reference material.

The radio frequency spectrum is a valuable resource. When agencies and individuals agree to share portions of it, they carry a responsibility to adhere to recognized policies and procedures for the benefit of all. The plans presented in this manual has been developed for the benefit of all Montana public safety agencies.

Please contact the agency below with suggestions of how cooperative communications could work better for you.

Public Safety Radio
Montana Department of Administration
Mitchell Building - Room 219
Helena, Montana 59620

(406) 444-2586

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Part I - General Information

Authorization

Authority to use radio frequencies can come by two primary means: license and interagency agreement. Land mobile radio licensing for state and local public safety agencies is the responsibility of the Federal Communications Commission (FCC). Federal agencies rely on the Interdepartmental Radio Advisory Council (IRAC) for frequency authorization.

Interagency agreements serve an important purpose in Montana public safety radio as well as elsewhere. When an agency licensed for a particular frequency allows another agency access to that frequency, a degree of communications interoperability is established where otherwise there may have been none. Such an agreement means that the licensing agency is agreeing to consider the other agency's units as its own for use of the frequency. Everyone is obligated by the terms of the license and the agreements themselves may further restrict use. It should be noted that agreements are generally for mobile use only - permanent base stations must be specifically listed with the FCC.

*In this manual, **mutual aid** will refer to frequencies designated for interagency communications and licensed statewide. Authorization for their use is given through agreement with the license-holding agency. Some may also be licensed for local use directly through the FCC. Procedures for both types of authorization are covered in Part VII, "Management and Administration".*

*Common will refer to frequencies designated for interagency communications, but not licensed statewide as mutual aid. They must be licensed by the using agency or used under agreement with a license holder for communications with that entity. Some are **only** available by agreement for communications with the license holder (e.g. State Lands and U.S. Forest Service common channels). For purposes of this manual, the term "common" will be used for frequencies recognized across the state. Some jurisdictions using central dispatch have agreed on their own "common" channel, but these will be referred to only in passing.*

Authorization procedures for common frequencies are also covered in Part VII.

Radio licenses are rarely granted for exclusive use; generally a licensee is designated as the primary user within a 75 mile radius of each base station. In Montana where fixed transmitters are often sited on mountaintops, frequency coordinators have made an effort to more closely examine interference potential beyond 75 miles.

The primary user of a mutual aid or common frequency is the one with the most urgent traffic - and there may be dozens of users within interference range. Users of Montana mutual aid and common frequencies are asked to remember that these frequencies are a critical shared resource.

Color Names

The term "mutual aid" means different things to different people, even when restricted to radio. When used to name a frequency or particular channel, it often leads to confusion over just which mutual aid frequency is being referred to.

In public safety radio where clarity and simplicity of communications is essential, long and contrived names for basic tools are burdensome. For this reason, the following color names are offered for use in reference to mutual aid and common frequencies. Each is also given a descriptive title to clarify its use.

Mutual Aid Frequencies

Frequency	Color	Usage
155.475 MHz	BLUE	National Law Enforcement Emergency
155.790	SILVER	State Law Enforcement Mutual Aid
153.905	GOLD	State Common Mutual Aid
154.070	RED	State Fire Mutual Aid
154.280	MAROON	State Fire Command and Control
154.265	CORAL	State Fire Ground #1
154.295	SCARLET	State Fire Ground #2

Common Frequencies

Frequency	Color	Usage
155.820 MHz	BROWN	State DES Direction and Control
155.160	VIOLET	National Search and Rescue
155.220	PURPLE	State Search and Rescue
155.280	WHITE	State Local Hospital to Ambulance
155.340	TAN	State Regional Hospital to Ambulance
155.325	GRAY	EMS Central Region Dispatch & Paging
155.385	PINK	EMS East/West Region Dispatch & Paging
151.220	YELLOW	State Forestry - Department of State Lands
171.475	GREEN	U.S. Forest Service Common

Color names were chosen because the names are short, commonly recognized, and have been linked with associative memory. It was not intended that the actual colors themselves be painted on radio control heads or otherwise used where different shades are indistinguishable or colorblind persons may mistake them.

Clear Text

The need for clarity and simplicity in public safety communications goes far beyond the naming of channels. The use of codes, particularly the various agency-specific and ten-codes, has been found to be a barrier in the transmission of information. While codes may ideally reduce the length of transmissions, in practice the time gained is lost in repeated messages and explanations of unfamiliar terms. The most negative effect of codes is a reduction in communications interoperability during multi-agency response.

For these reasons clear text or plain language is encouraged on all mutual aid and common channels. A generalized clear text guide has not been found available for this manual, but a more specialized one is included in Part III, "Fire", page 24. The International Calling Sequence (called unit, calling unit) is also recommended.

Priority Use Levels

Five priority use levels are established for communications on mutual aid and common radio frequencies. Higher priority traffic takes precedent over lower.

1. *Immediate Peril - An immediate threat to human life exists*
2. *Disaster or Extreme Emergency - An imminent threat to human life or of large-scale property destruction exists*
3. *Routine Emergency - Distinguished from the above by scale or nearness of threat*
4. *Urgent Administrative and Itinerant*
5. *Training, Drills, and Administrative*

Incident Communications Plans

Communications is the nervous system of incident response. In emergency response, communications is critical and planning is the key to systems that are available, reliable, and adequate. Within Montana, mutual aid and common frequencies are a resource whose use can be tailored for specific situations.

In principle, the structure of a communications system reflects the organizational structure of the agency or incident it serves. In practice, however, the reverse is too often true: The organizational structure (especially in emergencies) is molded by the available or adopted communications methods.

The National Interagency Incident Management System (NIIMS) Incident Command System (ICS) is recognized as providing a superior command structure for emergency response. It also provides a predictable organizational structure for communications planning. This manual adopts ICS conventions and the extended plans offered here reflect ICS structure. The simple plans suggest only interagency communications, as opposed to those between functional divisions, thus making them less desireable from an integrated management point of view.

Incident Communications Plans - (cont.)

This section discusses preplanning, basic interagency operations, basic inter-discipline operations, and extended incidents.

1. PREPLANNING

A plan for emergency response communications should begin with an inventory of available resources combined with an analysis of likely classes of emergencies. Resources could include everything from paging receivers to mobile relays, from telephone handsets to central office switches. As a practical matter, an inventory will best serve the agency if it not only looks at the individual pieces of hardware, but also at how that hardware is used as part of a system. In this manner, redundancies are highlighted and risky dependencies are exposed.

Identification of outside equipment and services is equally important. Agencies within a given geographical area might form cooperative agreements to share resources when one has emergency needs. Similar agreements may be made with others outside the area in case a disaster overwhelms resources of all agencies within it. While public safety agencies often rely on general mutual aid agreements with other jurisdictions for such instances, specific communications preplanning will help avoid problems.

Careful attention should be given to equipment and services from the private sector. Private communications companies may be able to provide resources on a contingency basis and thus spare agencies the cost of maintaining radio caches, systems, etc. Additionally, private mobile radio, radio telephone, radio common carrier, and cellular telephone systems abound in Montana and could prove to be invaluable resources during an emergency.

An agency's jurisdiction and responsibilities affect its communications requirements and obviously determine what types of emergencies it might face. If as part of a preplanning process an agency can group those possibilities into classes based on projected communications needs, resource utilization can be simplified.

For example, one particular class of emergency may call for a supply of short range portables, while another may require multiple channels of communications to an Emergency Operations Center, possibly best provided by telephone. A contained hazardous materials spill might fall into the first class with primarily short range needs; a remote hostage incident might fall into the second with a greater need for the security, direct connections, flexibility, and range that telephone facilities can provide.

One class of emergency that requires special attention is the failure of communications systems, themselves. An unexpected side effect of the February 1989 train wreck and explosion in Helena was the failure of a number of primary mobile relays serving the affected area. Emergency response efforts were complicated and no alternative, such as a portable repeater, was available. While all contingencies cannot be anticipated, redundancies in communications systems can be worth the cost.

Incident Communications Plans - (cont.)

1. PREPLANNING - (cont.)

A needs analysis provides a basis for decisions about the adequacy of existing resources, the requirements for outside resources, and most importantly, about the transition point from normal, everyday emergency operations to special equipment, networks, and procedures. Unfortunately, the failure to recognize that need for transition, especially in command and communications, often turns emergencies into disasters.

Preplanning is necessary for informed decisions and orderly transitions.

2. BASIC INTERAGENCY OPERATIONS

Basic interagency operations are simplified by the existence of mutual aid and common radio frequencies. For the vast majority of instances, a single frequency in common between a couple agencies provides all the communications interoperability needed. And most of the communications in those instances are between units of similar function - e.g. deputy sheriff to highway patrol officer, rural firefighter to city firefighter. This manual will refer to radio contacts between different public safety services as inter-discipline communications, which are implicitly interagency by nature. They are discussed in the next section.

The incident communications plan for basic (or tactical) interagency operations is simply the designated frequency for the involved service.

One frequency has been licensed statewide for law enforcement tactical use and another has been licensed and designated for primary fire tactical use. They are:

SILVER - State Law Enforcement Mutual Aid

RED - State Fire Mutual Aid

Two other frequencies are commonly agreed upon for tactical use within their respective disciplines, but have not been licensed statewide. They are common channels as defined at the beginning of this manual. They are:

PURPLE - Statewide Search and Rescue

TAN - Statewide Regional Hospital to Ambulance

While the TAN channel is primarily intended for regional hospital to ambulance communications, its inclusion here is to establish it secondarily as a tactical channel as it will be used by EMS in extended incidents.

Incident Communications Plans - (cont.)

3. BASIC INTER-DISCIPLINE OPERATIONS

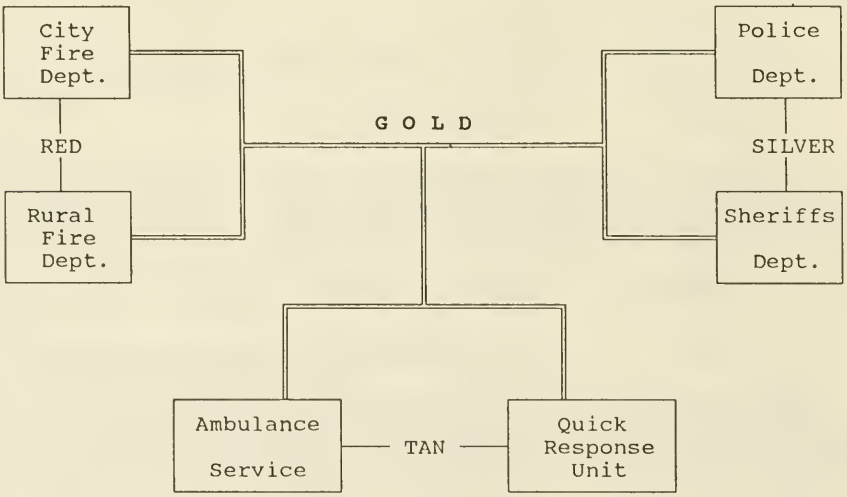
One single frequency has been licensed statewide for inter-discipline use and is the most widely spread among public safety agencies and emergency responders. It is intended as the primary communications channel between different services. It is:

GOLD - State Common Mutual Aid

All Montana public safety radio users should have access to the GOLD frequency.

The incident communications plan for the most basic inter-discipline operation would include only one channel: the GOLD frequency. For example:

A more complex operation may have multiple agencies within various public safety services and so other service-specific frequencies would begin to be used. Ignoring the likely need for a unified incident command, a plan may look like this:



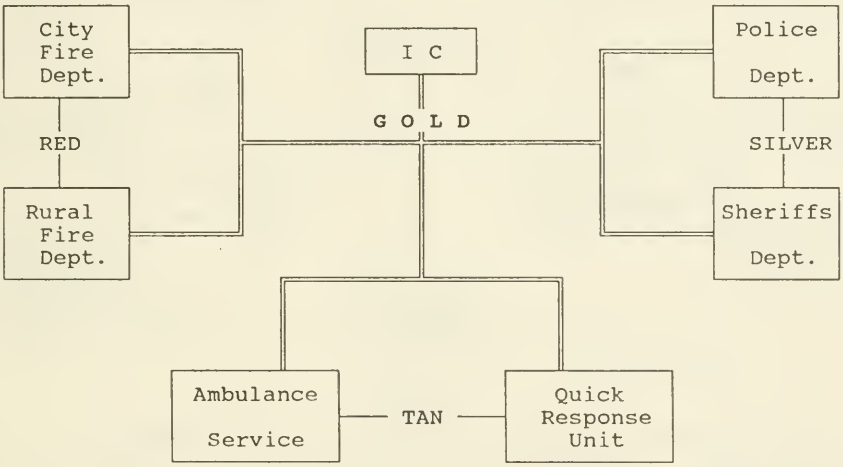
Incident Communications Plans - (cont.)

3. BASIC INTER-DISCIPLINE OPERATIONS - (cont.)

Note that the GOLD frequency is reserved for inter-discipline use.

Appendix A of this manual contains sample ICS Form 205's, Incident Radio Communications Plan. Sample Plan 'A' describes the radio channel utilization depicted above.

Under an ICS structure with introduction of an incident commander (IC), the GOLD channel would be used to control responding units directly, as such:



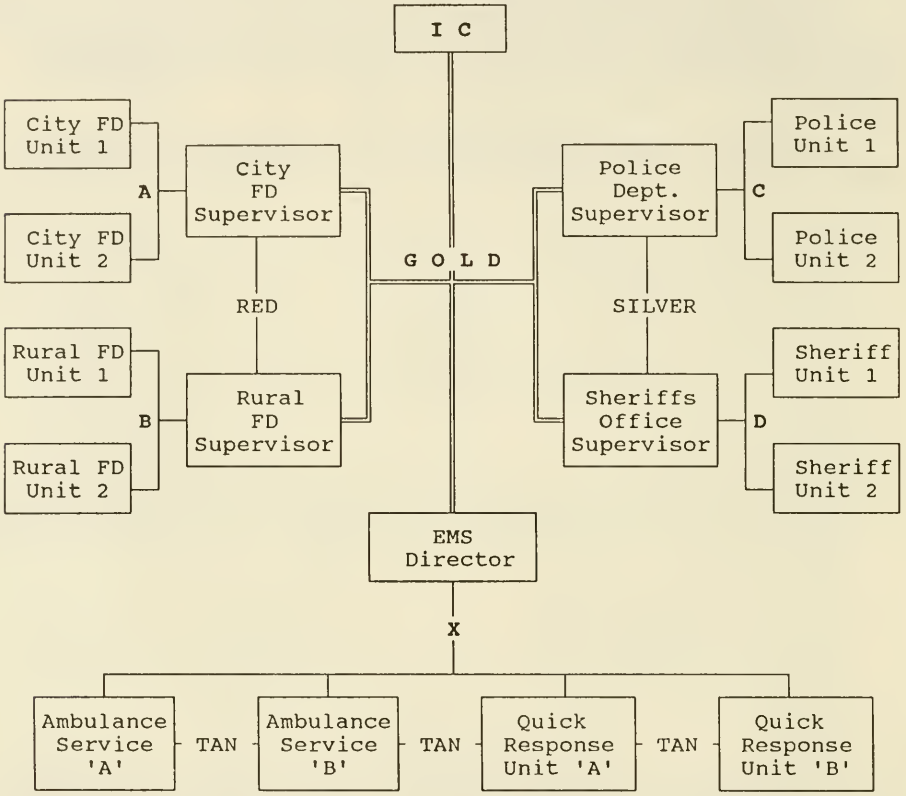
The single command represented here by the IC would and should lead to reduced use of the RED, SILVER, and TAN channels because less direct interagency communications will be required. Even in the most rigid ICS structure, tactical coordination needs will call for some sort of interagency communications capability at the field level, so these channels are retained for that use.

4. EXTENDED INCIDENTS

A more complex communications plan may be needed when multiple units within an agency respond to a multi-agency, multi-discipline incident. Such cases add at least one more level to the command structure and this should be reflected in the plan:

Incident Communications Plans - (cont.)

4. EXTENDED INCIDENTS - (cont.)



Sample Plan 'B' in Appendix A is an ICS Form 205 describing the radio channel utilization depicted above.

Note that the GOLD channel is still reserved for the first inter-discipline level of communications and the RED, SILVER, and TAN channels are still used at the first interagency level within a discipline.

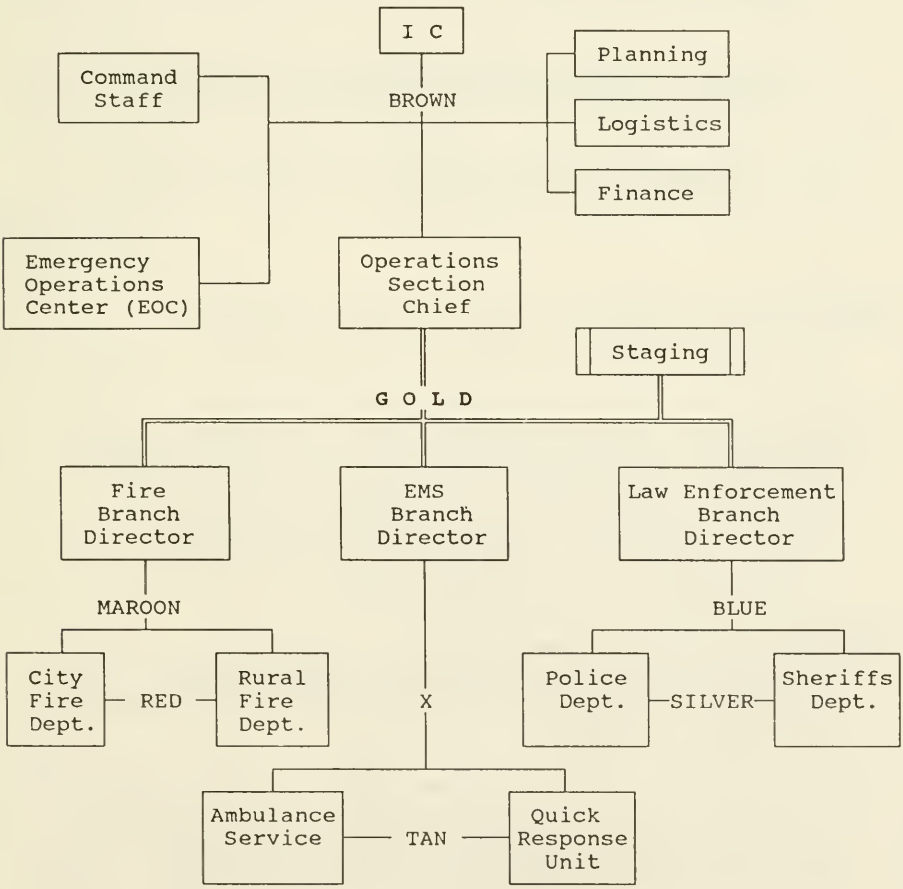
Channels A, B, C, and D in the above diagram represent the agencies' own working frequencies. Channel X represents the off-region EMS dispatch and paging frequency and is added as a new communications channel to support the addition in this example of an EMS branch director. Subsequent parts of this manual expand on the separate communications plans of law enforcement, fire, EMS, DES, and

Incident Communications Plans - (cont.)

4. EXTENDED INCIDENTS - (cont.)

search and rescue. See Part IV, "Emergency Medical Services", for dispatch and paging frequency use details.

The most complex incident to be dealt with here is one where the magnitude of response would cause the incident commander to give up direct management of resources and divide operations from other incident management. In such a case, the operations section would continue using a communications net similar to that described above with minor additions for an extended command structure and the addition of a command/control net above. The higher levels may appear as such:



Incident Communications Plans - (cont.)

4. EXTENDED INCIDENTS - (cont.)

Sample Plan 'C' in Appendix A is an ICS Form 205 describing the radio channel utilization depicted above.

*Three channels have been added: **BROWN**, **MAROON**, and **BLUE**. A separate incident command net is needed when operations are removed one step from the incident commander; the **BROWN** frequency (State Direction & Control) is appropriately selected. Similarly, fire and law enforcement branch directors have been separated out in this example and branch command nets are needed; the **MAROON** and **BLUE** frequencies are assigned, respectively.*

Two principles span these plans:

1. *Frequencies assigned for basic interagency communications remain at the first interagency level (**RED, SILVER,** and **TAN** in these examples).*

2. *The primary inter-discipline frequency (**GOLD**) remains at the first inter-discipline level of communications.*

Base Station Use of Mutual Aid and Common Frequencies

Four Montana mutual aid frequencies can be installed in base stations:

GOLD - The State Common Mutual Aid channel may be licensed by public safety agencies eligible under FCC §90.17 as local government entities for installation in base stations. It must be licensed with the FCC by the agency and is restricted to secondary use (mobiles on this frequency being considered primary by the FCC). Base stations will be limited to 100 watts of nominal power and antennas to 20 feet or less in height above ground or an existing building.

MAROON - The State Fire Command and Control channel may be licensed by fire service agencies for base station installation as provided in the Montana Mutual Aid Radio, Fire Frequencies, Policies and Procedures (Appendix J in this manual.

BLUE - The National Law Enforcement Emergency channel may be installed in base stations by law enforcement agencies through authorization by the Montana Department of Administration, as provided in the Montana Mutual Aid Radio, Law Enforcement Frequencies, Policies and Procedures (Appendix I in this manual.)

Base Station Use of Mutual Aid and Common Frequencies - (cont.)

SILVER - The State Law Enforcement Mutual Aid channel may be licensed by law enforcement agencies for base station installation as provided in the Montana Mutual Aid Radio, Law Enforcement Frequencies, Policies and Procedures (Appendix I of this manual).

Other Montana common frequencies can be installed in base stations, as well:

WHITE, TAN, GRAY, and PINK channels may be licensed as provided by the Montana EMS Communications Plan (See Part IV, "Emergency Medical Services", Section 3 below).

BROWN - The State DES Direction and Control channel may be licensed as provided by the Montana Mutual Aid Radio, DES Direction and Control Frequency Plan (Appendix G of this manual).

VIOLET and PURPLE - The National and State Search and Rescue channels may be licensed as provided by the Montana Mutual Aid Radio, Search and Rescue Frequencies Plan (Appendix H of this manual).

No Montana mutual aid frequencies are available for installation in mobile relays (repeaters).

Part II - Law Enforcement

Overview

Appendix I contains the official policies and procedures for Montana law enforcement mutual aid frequencies. Oversight, eligibility, licensing and authorization, operational requirements, and discipline are covered in the formal document. The following discussion expands on the intent and practical application of law enforcement mutual aid radio.

Mutual aid radio planning for law enforcement must recognize the extensive use of closed systems while accommodating interagency communications needs. The transition from VHF-low band to VHF-high band in law enforcement over the past few years has resulted in greater flexibility and control over system coverage previously unavailable. It has also required that agencies coordinate their communications carefully with other public safety agencies.

Law enforcement is typically the center of public safety in Montana and has found it necessary to allow other response agencies access to its systems for inter-operability. Mutual aid radio can help provide communications between different jurisdictions, types of responders, and levels of government. It cannot, however, replace standard, "private" channels for common operational needs.

For example, many county sheriffs work closely and regularly with city police within their jurisdictions. Sharing of their respective systems may be required for adequate coverage and accessibility. Mutual aid channels should be used to supplement these common operations, allow access for more sporadic operations, and provide a critical backup.

No precise definition can be made of the difference between "common" and "sporadic" operations as they are discussed here. The goal for mutual aid radio is to make it available when needed and not cluttered by regular day-to-day traffic. If two agencies rely on a mutual aid channel for such regular traffic, then they will have difficulty communicating when special incidents place heavier demands on it.

Users of Montana's mutual aid radio channels are asked to conserve this resource to make it most available when most needed.

Two classes of mutual aid traffic are considered here for law enforcement: emergency and administrative.

The BLUE channel[1] is for emergency communications and initial contact on more routine matters. Short, infrequent transmissions make it most available for sudden emergency traffic. It must be monitored widely to be of most value.

The SILVER channel is for dispatch-to-dispatch communications and tactical operations. Administrative traffic is appropriately carried here unless preempted by a higher priority need. Priority use levels are cover on page 3, above.

---

[1]. See Part I, "Color Names" for a complete list of names.

Overview - (cont.)

*The **GOLD** channel is for inter-discipline communications (law enforcement-fire, law enforcement-highway department, etc.) It is used for both emergency and administrative (non-emergency) traffic, subject to priority use levels.*

*The **BLUE** and **SILVER** channels are law enforcement frequencies. The only non-law enforcement users allowed access are ambulances and public bus services on **BLUE** for contact with law enforcement, only. These two groups were provided with special access because they frequently cross jurisdictional boundaries and may need contact with a variety of law enforcement, particularly dispatch centers. The **BLUE** channel is intended for placement in all law enforcement base stations and so is the most likely resource for their emergency needs.*

Emergency Communications

*The **BLUE** channel (National Law Enforcement Emergency) is the primary channel for law enforcement interagency emergency communications. In instances where continued or tactical interagency communications are needed at an incident, initial contact may be made on the **BLUE** channel and responders instructed to move to the **SILVER** channel.*

*For example, at a vehicular accident scene the **BLUE** channel could be used to hail other law enforcement responders and direct them to the **SILVER** channel for continued operations.*

*Emergency operations may be conducted on the **BLUE** channel, if necessary, but an attempt should be made to off-load it as much as possible for other sudden emergencies. The goal is to have it available for other traffic.*

Administrative Communications

*The **SILVER** channel is established as the primary frequency for law enforcement interagency administrative communications.*

1. ITINERANT TRAFFIC

*Itinerant traffic such as between a prisoner transport and a dispatch point enroute should be carried on the **SILVER** channel. If necessary, initial contact may be made on the **BLUE** channel, but should be transferred as soon as possible.*

2. POINT-TO-POINT

*The **SILVER** channel may also be used for point-to-point (base-to-base) communications. FCC §90.417 and 90.419 authorize interstation communications*

Administrative Communications - (cont.)

between different licensees "when the communications involved relate directly to the imminent safety of life or property," on a secondary basis to base-mobile or mobile-mobile operations. This applies to all fixed stations on public safety frequencies commonly used in Montana, not just mutual aid.

Agencies must license their own base stations on the SILVER channel. The State of Montana maintains a statewide mobile license for this frequency and can directly authorize mobile use. No authorization by agreement is available for base station installation. Licensure by agencies is subject to coordination by the Montana Frequency Advisory Committee (of APCO) and is contingent upon prior installation of a BLUE base station.

As coordinator of police and local government frequencies in the state, the Montana Frequency Advisory Committee (MFAC) may recommend changes to limit range or harmful interference potential. A law enforcement mutual aid radio oversight council to the Department of Administration will arbitrate if MFAC and the applicant agency cannot find a mutually acceptable solution.

No special technical restrictions are established for SILVER base stations, but agencies making application should design their systems to minimize nuisance interference. Subaudible tone selection of receivers is not allowed for mutual aid and is discouraged for common frequencies. Toning reduces interoperability and negates much of the rationale behind mutual aid.

A DTMF (dual-tone/multiple frequency) plan has been adopted for SILVER base stations to reduce extraneous traffic in communications centers that wish to use it. DTMF encoding provides some of the protection of subaudible toning without locking out all units without the added key.

Montana Law Enforcement Mutual Aid Frequency
Base Station DTMF Plan

Suggested codes consist of three digits, the first two being the county number as used on vehicle license plates and the last digit being a intra-county selector. The last digit is also used for group call selection. Agencies employing this form of muting should allow receiver selection by their individual, county all-call, regional all-call, and state all-call codes. Leading zeroes (0) must be used.

000	*State All-Call*	*nn1,nn2*	*County Sheriff Codes*
0nn	*Regional All-Call*	*nn3,nn4,nn5*	*City Police Codes*
nn0	*County All-Call*	*nn6*	*Fish, Wildlife, and Parks*
		nn7	*Montana Highway Patrol*

Where 'nn' is the two digit county number (e.g. '01' for Silver Bow, '32' for Stillwater). Regional codes will be issued as requested by the Department of Administration. Agencies are asked to request assignment of regional codes as needed to guarantee a common plan across the state. Codes in use will be published by the Department of Administration.

Incident Communications Plans

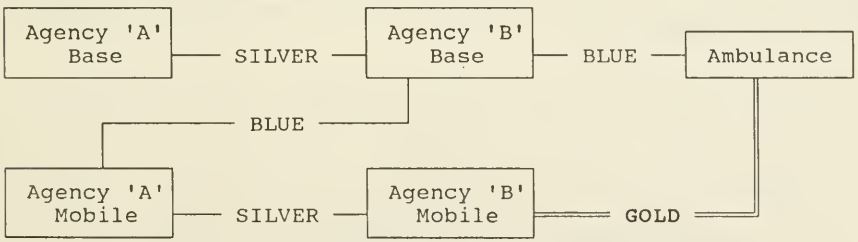
The incident communications planning discussed here only addresses law enforcement and does not attempt to cover all the resources available within any given jurisdiction. More general plans for other public safety services are covered in Part I, "General Information".

1. BASIC INTERAGENCY OPERATIONS

Basic interagency law enforcement operations are conducted on the SILVER channel. As noted above, use of the BLUE channel should be limited to interagency emergency and base-mobile communications. It may be used for initial contact on non-emergency matters, but traffic should be switched as soon as possible to one of the tactical mutual aid (SILVER, usually, for law enforcement) or local common coordination channels, if available.

While the GOLD channel (State Common Mutual Aid) has been used a great deal in the past for law enforcement - to - law enforcement traffic, it should be reserved for inter-discipline communications where it is likely the only shared frequency. Ambulances and public bus service providers have been given access to the BLUE channel for emergency contacts with law enforcement base stations, but are expected to use the GOLD channel otherwise.

A basic communications plan for law enforcement would have agencies using their own channel(s) between their own units, the SILVER channel for contact between like units (mobile-mobile, base-base), the BLUE channel for interagency base-mobile contacts, and the GOLD channel for inter-discipline mobile-mobile communications. Graphically, it may be depicted as this for the mutual aid channels:



The agencies' own communications channels are not diagrammed here and some complementary lines (e.g. ambulance to Agency 'A' mobile) are left out for clarity's sake.

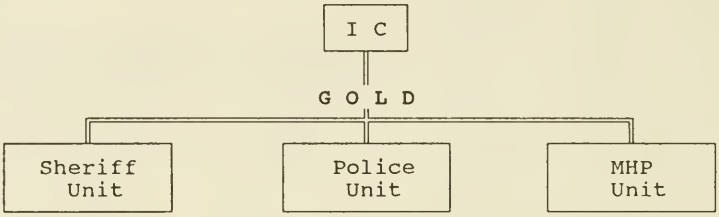
In this example, a bus could be substituted for the ambulance since both have access to BLUE. Other public safety responders who do not have access to the BLUE channel would still contact law enforcement mobile units on GOLD.

Incident Communications Plans - (cont.)

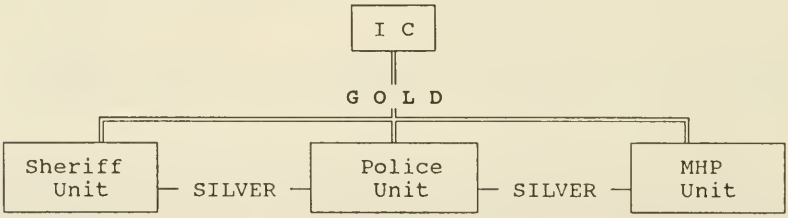
1. BASIC INTERAGENCY OPERATIONS - (cont.)

The remainder of the plans discussed here follow closely Incident Command System (ICS) structure. ICS is an effective tool for the management of emergency operations. Its concepts of common terminology, modular organization, integrated communications, unified command structure, and manageable span-of-control, among others, are the keys to successful operations. Even in simple incidents, ICS can be put to work.

When an incident commander (IC) is designated during an event or operation, it is useful to have a separate net for command communications. This net would be used for direct control of operational elements during a simple incident. For example:



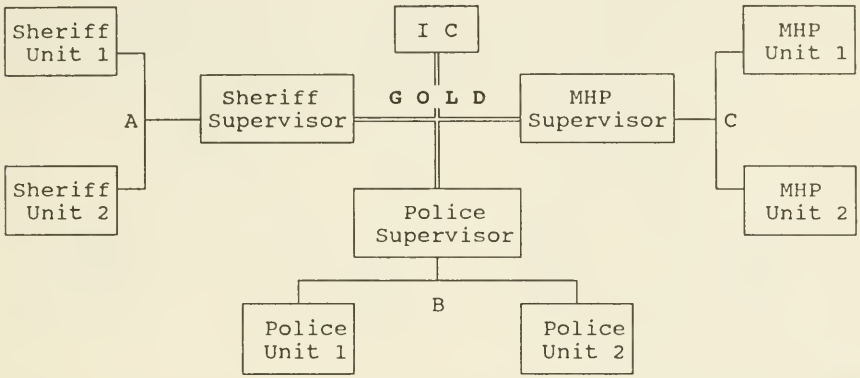
The SILVER channel could have been used here for the command net during a purely law enforcement operation, but use of the GOLD channel will simplify expansion of the communications plan if the incident escalates and other types of public safety services are needed. SILVER could be retained here for interagency tactical communications, such as:



Incident Communications Plans - (cont.)

1. BASIC INTERAGENCY OPERATIONS - (cont.)

When multiple units of an agency are involved, one of that agency's working channels becomes (or remains) its tactical channel:



Where A, B, and C are the agencies' own working channels.

A simple incident where one ambulance or a highways sander, say, is also involved is handled easily by placing it on the command net (GOLD). If the situation expands much beyond that, a more complex plan is needed, retaining the channels mentioned so far in their designated functions.

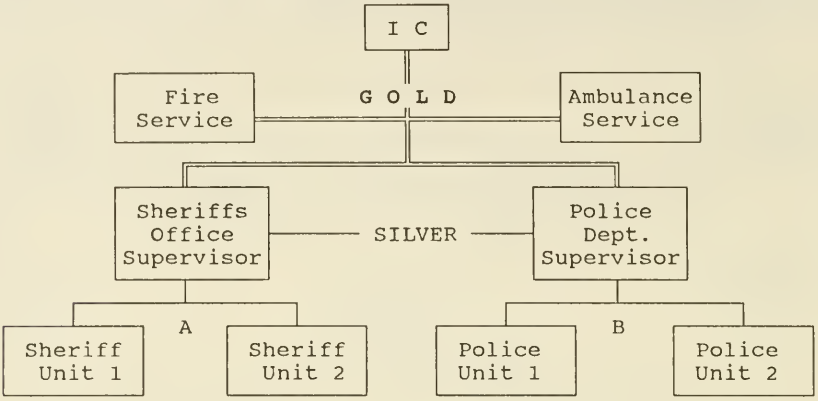
2. EXTENDED INCIDENTS

Extended incidents require both more formal communications plans and a broader network to cover a variety of response agencies. No mutual aid radio plan will be able to provide all the communications necessary in a large incident where police, fire, EMS, search and rescue, and road maintenance workers among others may converge. Communications preplanning, taking into account all available resources, is essential for adequate response to such emergencies. Through this process, a formal plan can be developed that puts mutual aid radio to best use.

A generalized mutual aid plan is covered in Part I, "General Information" above. It establishes the SILVER channel for the first level of interagency law enforcement communications in both basic and extended incidents. In an incident command system, the GOLD channel is used at the highest operational level. In many cases it would be used by the incident commander (IC) to direct the various types of resources (fire, EMS, law enforcement, etc.) that respond. A simplified plan focusing on the law enforcement organization may appear as this:

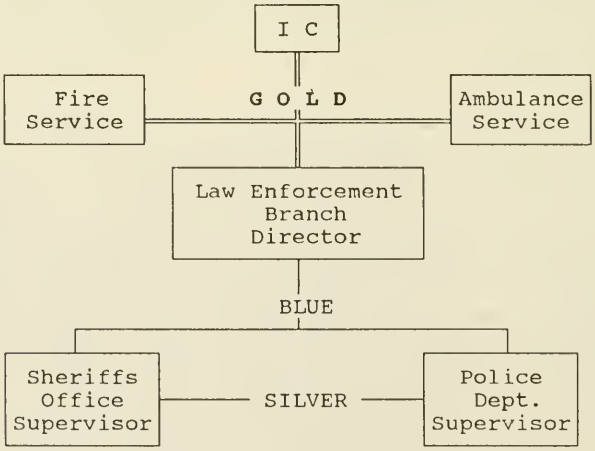
Incident Communications Plans - (cont.)

2. EXTENDED INCIDENTS - (cont.)



Where A and B are the agencies' own working channels.

When a separate law enforcement command net is needed as the incident extends, the BLUE channel is used with SILVER being retained for the highest interagency communications channel. For example, the previous plan would be modified as below, focusing on law enforcement and excluding the individual units:

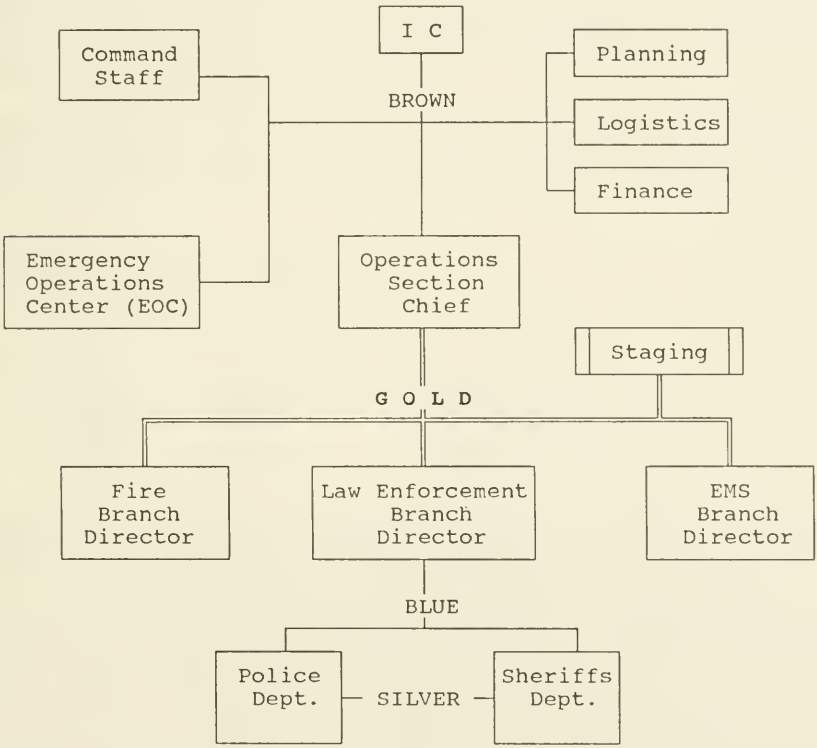


Incident Communications Plans - (cont.)

2. EXTENDED INCIDENTS - (cont.)

As an incident becomes more complex, operations are likely to be split from other command functions and an operations section chief assigned. The GOLD channel would continue to serve as the primary inter-discipline command net, while a new frequency would be assigned for incident command communications between the command staff and each functional section chief. The BROWN channel (State DES Direction and Control) could be used here.

A large-scale incident communications plan may appear as such, with emphasis on the law enforcement structure:



Incident Communications Plans - (cont.)

2. EXTENDED INCIDENTS - (cont.)

The need to incorporate individual agencies' working frequencies into these plans cannot be overstated. Incidents regularly occur where direct base-mobile communications are impossible and mobile relay (repeater) systems are required. Since no mutual aid frequency is available for use in repeaters, these systems will have to be those maintained by the involved agencies.

Provisions should be made to give the various types of responders within a jurisdiction access to the wide-area networks covering the jurisdiction for maximum coverage and flexibility in formulating a communications plan.

Part III - Fire

Overview

Appendix J contains the official policies and procedures for Montana fire mutual aid frequencies. Oversight, eligibility, licensing and authorization, operational requirements, and discipline are covered in the formal document. This section expands on the intent and practical application of fire mutual aid radio.

Montana has nearly 400 fire service entities - more different emergency response organizations than law enforcement, EMS, and search and rescue combined. Most of these fire services have one or more radio frequencies licensed for their own use within their own jurisdictions. Many also have access to local coordination radio systems, often using mobile relays (repeaters). Mutual aid and common frequency use can supplement locally licensed systems and provide much needed communications interoperability.

The FCC has allocated 22 frequencies within the VHF-high band for fire base/mobile systems and another six for mobile-only use. Three of the base/mobile frequencies are limited to intersystem use and have been adopted along with one of the mobile-only frequencies for mutual aid use in Montana.

1. MUTUAL AID FREQUENCIES

The Montana fire mutual aid frequencies are:

RED	*154.070 MHz*	-	*State Fire Mutual Aid*
MAROON	*154.280*	-	*State Fire Command and Control*
CORAL	*154.265*	-	*State Fire Ground #1*
SCARLET	*154.295*	-	*State Fire Ground #2*

The RED channel is the mobile-only frequency and is the primary channel for interagency communications. In many instances this channel will provide all the interoperability between different organizations needed for communications.

The MAROON channel has been established for higher level command and control. It is available for installation in base stations and mobiles. This channel is to be used for directing diverse resources to large scale incidents as well as for on-scene command when not tied up with base-base traffic.

The CORAL and SCARLET channels are intended to both be used as additional fire ground frequencies. The Montana Fire Frequencies Plan (Appendix E) prohibits permanent base stations on these frequencies. An agency may obtain a temporary base station license, covering a specific area, to allow establishment of a base on these frequencies for special incidents. FCC regulations require that any station intended to be operated for a year or more be permanently licensed at the specific site; the CORAL and SCARLET frequencies cannot be so licensed.

Overview - (cont.)

*A fifth mutual aid frequency is available for fire service use: **GOLD** (State Common Mutual Aid). This channel is available to all Montana public safety and emergency responders. It is designated for inter-discipline (fire-EMS, EMS-search and rescue, etc.) communications.*

*The State of Montana maintains statewide mobile licenses for all four fire and the **GOLD** mutual aid frequencies as well as a statewide temporary base license for the **MAROON** frequency. It can provide mobile authorization to use the frequencies to fire service entities already licensed in the fire or local government FCC services. It can also provide temporary authorization to establish **MAROON** base stations for special incidents. Part VII, "Management and Administration" covers details of obtaining these authorizations.*

*It should be noted that the **MAROON** channel is commonly used for fire mutual aid by our surrounding states and so is an additionally valuable resource.*

2. COMMON FREQUENCIES

Additional frequencies used by some large fire services are available through interagency agreement or, in some cases, by direct licensing.

*The Department of State Lands common (**YELLOW** - 151.220 MHz) and the U.S. Forest Service common (**GREEN** - 171.475 MHz) frequencies can be of great value and may be used through agreement with those agencies.*

*The State DES Direction and Control (**BROWN** - 155.820 MHz), the National Search and Rescue (**VIOLET** - 155.160 MHz), and the State Search and Rescue (**PURPLE** - 155.220 MHz) frequencies are available for licensing by those qualifying within the Local Government and Special Emergency services, respectively. They each have specific functions in Montana's public safety radio plans and are not for general fire use, but may be valuable to have.*

Many areas of the state have their own "common" channels for coordination of different resource groups, sometimes just fire organizations, sometimes all emergency responders. These channels should be used to their fullest with provisions made for communications to outside resources, generally through use of mutual aid channels. When a local communications resource exists that can be used before resorting to mutual aid, it should be. Mutual aid radio should not be relied on in place of adequate planning and utilization of local resources.

3. COMMUNICATIONS PROTOCOLS

Current thinking on emergency communications protocols emphasizes the use of common terminology and clear text to assure interoperability. Another, generally unstated, protocol is the respect of priority use levels or making way for more urgent traffic. Priority use levels for Montana mutual aid radio are listed in Part I, "General Information", page 3.

Overview - (cont.)

3. COMMUNICATIONS PROTOCOLS - (cont.)

Common terminology in the fire services has evolved as the Incident Command System (ICS) has spread around the country. Three elements of emergency response where common terminology is essential have been established (ICS-120):

- *Organizational Functions* - A standard set of major functions and functional units has been predesignated and named for the ICS. Terminology for the organizational elements is standard and consistent.

- *Resource Elements* - Resources refer to the combination of personnel and equipment used in tactical incident operations. Common names have been established for all resources used within ICS. Any resource that varies in capability because of size or power, for example helicopters, engines, or rescue units, is clearly typed as to capability.

- *Facilities* - Common identifiers are used for those facilities in and around the incident area that will be used during the course of the incident. These facilities include such things as the command post, incident base, and staging areas.

Common terminology is essential for effective communications. It is absolutely critical for interagency communications where mutual aid radio is the medium.

Further discussion of common terminology is beyond the scope of this manual. See ICS texts, such as Fire Protection Publication's Incident Command System, for further information.

Clear text or plain language is encouraged on all mutual aid and common channels. The use of codes, particularly agency-specific and ten-codes, is discouraged as it reduces communications interoperability. The guide on the next two pages is commonly used in the fire services.

A corollary application of plain language is when contact is first made during a series of transmissions. The convention of using the called unit's name first, then the calling unit's, is suggested for all public safety radio. For example: "Railroad Incident Commander, Three Forks Fire Chief." In many cases, the actual person's name is used instead of a title.

Overview - (cont.)

3. COMMUNICATIONS PROTOCOLS - (cont.)

ICS CLEAR TEXT GUIDE

Unreadable	Used when signal received is not clear. In most cases, try to add the specific trouble. Example: "Unreadable, background noise."
Loud and Clear	Self-explanatory
Stop Transmitting	Self-explanatory
Copy, Copies	Used to acknowledge message received. Unit radio identifier must also be use. Example: "Engine 2675, copies."
Affirmative	Yes
Negative	No
Respond, Responding	Used during dispatch - proceed to or proceeding to an incident. Example: "Engine 5176, respond ..." or "St. Helena, Engine 1375 responding."
Enroute	Normally used by administrative or staff personnel to designate destinations. Enroute is NOT a substitute for responding. Example: "Redding, Chief 2400 enroute RO II."
In-quarters, with Station Name or Number	Used to indicate that a unit is in a station. Example: "Morgan Hill, Engine 4577 in-quarters, Sunol."
Uncovered	Indicates a unit is not in-service, because there are no personnel to operate it.
Out-Of-Service	Indicates a unit is mechanically out of service. Example: "Auburn, transport 2341, out-of-service." Note, when repairs have been completed the following phrase should be used: "Auburn transport 2341, back in-service, available."
In-Service	This means that the unit is operating, not in response to a dispatch. Example: "Fortuna, Engine 1283, in-service, fire prevention inspections."
Repeat	Self-explanatory
Weather	Self-explanatory
Return to	Normally used by communications center to direct units that are available to a station or other location.

Overview - (cont.)

3. COMMUNICATIONS PROTOCOLS - (cont.)

ICS CLEAR TEXT GUIDE

What is your Location?	Self-explanatory
Call ____ by Phone	Self-explanatory
Disregard Last Message	Self-explanatory
Stand-By	Self-explanatory
Vehicle Registration Check	Self-explanatory
Is ____ Available for a Phone Call?	Self-explanatory
At Scene	Used when Units arrive at the scene of an incident. Example: "Perris, Engine 6183, at scene."
Available at Residence	Used by administrative or staff personnel to indicate they are available and on-call at their residence.
Can Handle	Used with the amount of equipment needed to handle the incident. Example: "Susanville Battalion 2212, can handle with units not at scene."
Burning Operations	Self-explanatory
Report on Conditions	Self-explanatory
Fire under Control	Self-explanatory
Emergency Traffic Only	Radio users will confine all radio transmissions to an emergency in progress or a new incident. Radio traffic which includes status information such as responding, reports on conditions, at scene and available will be authorized during this period.
Emergency Traffic	Term used to gain control of radio frequency to report an emergency. All other radio users will refrain from using that frequency until cleared for use by the communications center.
Resume Normal Traffic	Self-explanatory

Overview - (cont.)

3. COMMUNICATIONS PROTOCOLS - (cont.)

The International Phonetic Alphabet is another useful communications tool when alphabetic letters or the spelling of words must be transmitted.

INTERNATIONAL PHONETIC ALPHABET

A	ALPHA	N	NOVEMBER
B	BRAVO	O	OSCAR
C	CHARLIE	P	PAPA
D	DELTA	Q	QUEBEC
E	ECHO	R	ROMEO
F	FOXTROT	S	SIERRA
G	GOLF	T	TANGO
H	HOTEL	U	UNIFORM
I	INDIA	V	VICTOR
J	JULIETTE	W	WHISKEY
K	KILO	X	X-RAY
L	LIMA	Y	YANKEE
M	MIKE	Z	ZULU

Tactical and Command/Control Communications

At the simplest incident, command/control communications are indistinguishable from tactical communications. The incident commander in such a case is directing resources (command/control) right down to the smallest working (tactical) level. Mutual aid radio is rarely needed in such minor incidents since one working frequency is generally adequate.

A distinction between tactical and command/control communications needs to be made as an incident grows and one gains the potential of interfering with the other. More than one radio frequency may be needed to establish the separate nets, but it is possible that one or the other may be conducted using a medium other than radio.

Any public safety entity, fire service or otherwise, should have an adequate number of frequencies available to itself to conduct operations not requiring interagency response. In other words, if a given fire organization needs multiple, separate nets for internal command/control and tactical communications, it should have enough frequencies available to itself to satisfy its own needs. Mutual aid radio cannot provide all the frequency resources for public safety response; it is intended for interagency communications. The best use of locally licensed frequencies must be made for the mutual aid frequencies to be available when they are the only means of communications.

Fire Communications Plans

The RED channel is Montana's primary fire mutual aid frequency. For the simplest mutual aid incidents, it alone may be adequate for interagency communications. Users should be aware that our surrounding states have different uses for this frequency.

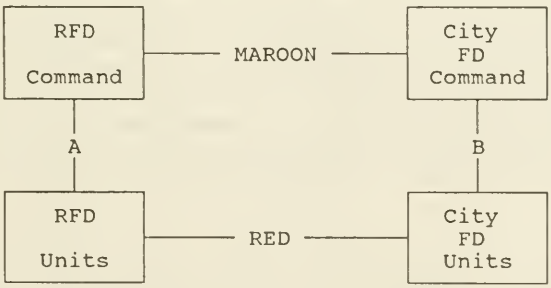
The FCC has established 154.265, 154.280, and 154.285 MHz (CORAL, MAROON, and SCARLET) as intersystem fire frequencies, meaning they may only be used for communicating between different fire radio systems. In Montana, the CORAL and SCARLET channels have been adopted for fire ground, or essentially tactical, use between different agencies. The MAROON channel has been adopted for interagency command/control communications, with provisions made for temporary and permanent base station licensing.

Fire communications plans offered here make use of these frequencies as as intended by the FCC and the Montana Fire Frequencies Plan (Appendix E).

1. BASIC INTERAGENCY OPERATIONS

The most basic communications plan for interagency fire use would have each organization using its own channel(s) amongst its own units and the RED channel for traffic between agencies. It may appear as such:

A slightly more complex plan is needed when interagency command must be separated from interagency tactical communications. For example:



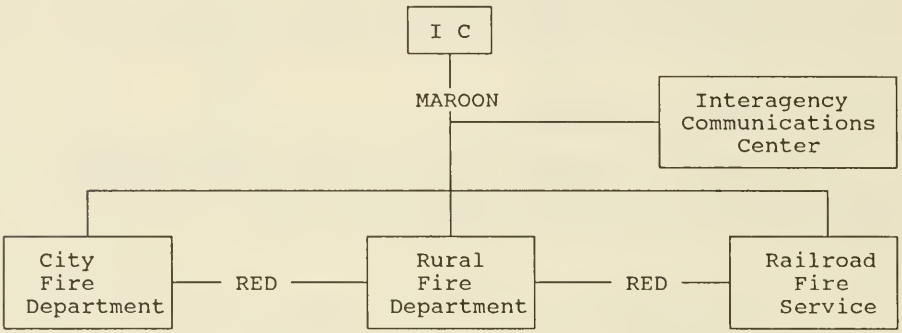
Where A and B designate the organizations' own frequencies.

Fire Communications Plans - (cont.)

1. BASIC INTERAGENCY OPERATIONS - (cont.)

*In the above, the **MAROON** channel is appropriately used for command traffic. Given the hierarchical structure of standard fire command, little traffic would be expected on the **RED** channel. An incident commander should be designated for unified command, so the preceding plans should be considered less desireable and not appropriate for modern incident command.*

*With the designation of an incident commander (IC) and the likely use of the **MAROON** channel by an interagency communications center, the plan may appear as this:*



*Here the **RED** channel is being used at the first interagency level below the command/control net (**MAROON**). The **GOLD** channel could have been substituted for **MAROON**, but the availability of a specific command/control frequency for fire mutual aid should encourage the use of **GOLD** exclusively for inter-discipline communications.[2] The fire ground channels (**CORAL** and **SCARLET**) could be put to use wherever additional tactical frequencies are needed.*

The above examples are simplified by addressing separate fire services as individual resources. The plans assume that further functional division (engine, crew, etc.) takes place within the agency and their own frequencies will be useable for communications. Often times, though, strike teams formed from different agencies are functional resources and the "private" frequencies of each agency are useless within the group. Mutual aid frequencies are appropriate for this use, though there are serious limitations because of the number available.

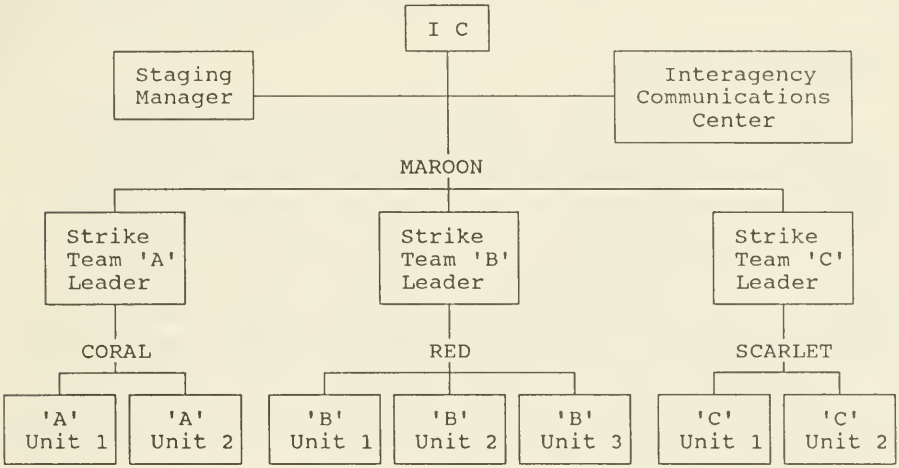
---

[2]. The basic interagency plans in the previous chapter, "Law Enforcement", suggested the **GOLD** channel for a similar command/control net since no other frequency is suitable and law enforcement interagency operations are most commonly inter-discipline.

Fire Communications Plans - (cont.)

1. BASIC INTERAGENCY OPERATIONS - (cont.)

Considering an incident involving only fire responders, a simple two-level command structure (with the IC managing operations) and a strike team approach, a communications plan may look as this:



The RED, CORAL, and SCARLET frequencies are randomly assigned here for equivalent functions. No special order is followed, though RED should be geographically closest to powerful MAROON transmitters since the other two are adjacent channels to MAROON and may be subject to interference.

It would be risky, in a variation to the above plan, to reassign the MAROON channel to tactical use and to use, say, the GOLD channel for incident command. First, MAROON is most likely to have base stations transmitting on it and thus interrupting operations. Command personnel will likely be in a better position both geographically and functionally to call 'emergency traffic only' to get critical communications across; field personnel will more likely be using low powered transceivers and be less vocal victims of interference. Second, if the incident escalates into a multi-discipline operation, the GOLD channel will be needed at the highest operational level and fire command would need to be moved to some other frequency. This latter likelihood would be further complicated by the fact that the MAROON channel was assigned to tactical units; a switch later in the incident to it as the command channel could be problematic.

General mutual aid planning should take into account the likelihood of multi-agency strike teams being used. If it is likely, plans should be made to pool

Fire Communications Plans - (cont.)

1. BASIC INTERAGENCY OPERATIONS - (cont.)

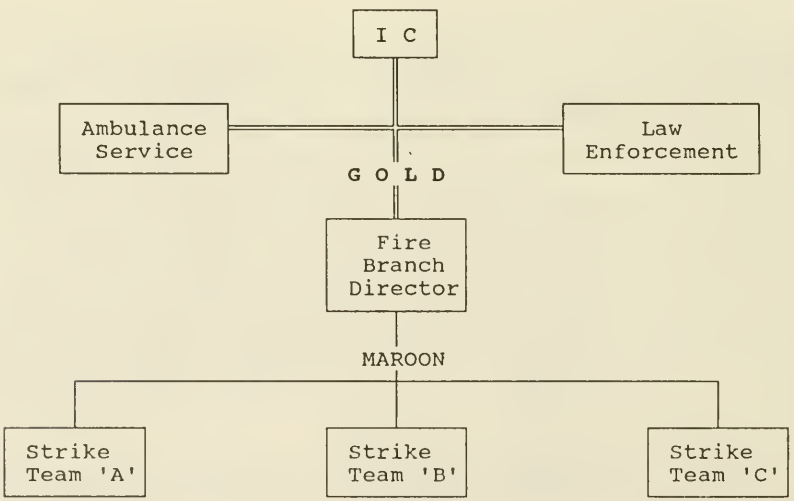
agencies' working frequencies for common use during situations as described above. The frequencies can be installed in radios of all cooperating agencies (as properly licensed) and a common channelization plan devised so "Channel 1", for example, is the same in all units.

2. EXTENDED INCIDENTS

Fire incidents have a high potential for becoming inter-disciplinary in nature with EMS and law enforcement involved, among others. Extended incidents as they are discussed here are those which involve other types of public safety services. They require additional planning for communications. The **GOLD** *channel is the primary means of radio communication between different public safety service types.*

The simplest inter-discipline incident may be one where the incident commander is directly responsible for fire operations as well as coordinating EMS response. The IC could use the **MAROON** *channel for command communications to fire units and the* **GOLD** *channel for communications with other responders such as an ambulance, highway patrol officer, or public works crew.*

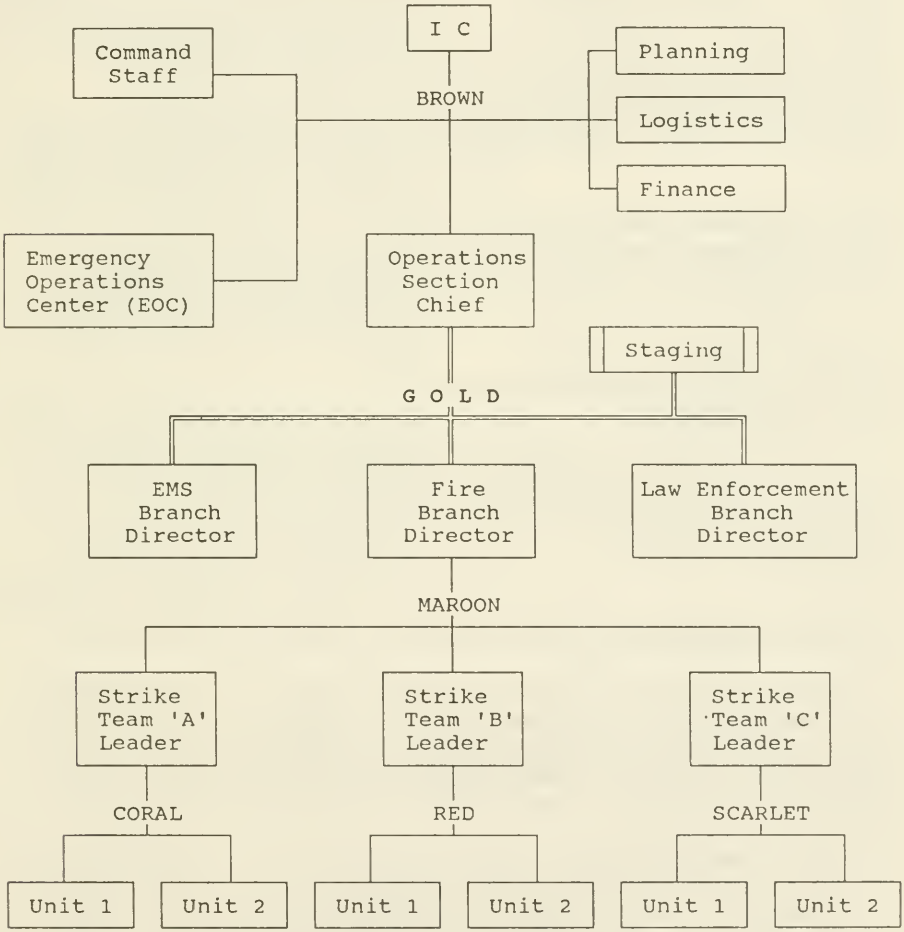
As the situation becomes more complex, the incident commander is less responsible for fire interagency coordination and more responsible for inter-discipline coordination. A separate fire branch may be established and the communications plan extends smoothly:



Fire Communications Plans - (cont.)

2. EXTENDED INCIDENTS - (cont.)

When direct operations responsibility is moved away from the incident commander and an operations section chief is instituted because of the incident complexity and scope, the communications plan can expand through use of the State DES Direction and Control (BROWN) channel. The most complex plan to be included here may appear as this:



Part IV - Emergency Medical Services

Montana EMS Communications Plan

1. PURPOSE

The goals of Montana emergency medical services communications are to:

Provide for easy and prompt citizen access to emergency medical services - preferably through a coordinated public safety agency central dispatching system;

Assure coordination with the dispatch of other emergency services agencies;

Provide, throughout the state, excellent hospital to ambulance radio communications;

Provide, throughout the state, excellent communications among all emergency response agencies;

Provide for the medical control necessary for progression to advanced life support;

Allow for coordinated communications with other agencies in the event of a major EMS incident;

Be coordinated statewide to assure a good system with a minimum duplication of effort; and

Assure that an ambulance service or other emergency medical response agency can contact a 24-hour physician-staffed emergency department from anywhere in the state.

2. GENERAL BACKGROUND

In the early 1970's, the Department of Transportation, throughout its Highway Traffic Safety Emergency Medical Services standard (Standard 11), encouraged the establishment of hospital to ambulance service communications systems. With funding made available through Highway Traffic Safety, many ambulance services and hospitals in Montana were provided with two-way radio communications on VHF-high band frequencies.

Very quickly, the frequency 155.280 MHz became the "de facto" standard for ambulance to hospital communications in Montana with 155.340 MHz becoming a secondary channel. Radio paging of ambulance service crews became a more common method of alerting personnel - a particular advantage for rural, volunteer services. All systems used open squelch rather than tone-coded receiver selection.

Montana EMS Communications Plan - (cont.)

2. GENERAL BACKGROUND - (cont.)

With the availability of new federal funding through the Department of Health, Education, and Welfare, there was increased emphasis placed on the development of a coordinated, statewide EMS communications system. The Emergency Medical Services Bureau of the Montana Department of Health and Environmental Sciences and the state Disaster and Emergency Services shared the services of a single communications planner.

In the early to mid-1970's, several statewide actions were taken:

- *The entire state EMS radio communications system was converted to a Dual-Tone/Multi-Frequency (DTMF) encoding and decoding system. Each hospital was assigned a unique number with the numbers and their assignments maintained by the Emergency Medical Services Bureau.*

- *To assist with the conversion process and to assure uniformity throughout Montana, the EMS Bureau purchased DTMF encoders for all ambulance services and DTMF encoders/decoders for all hospitals. The list of DTMF codes is still maintained by the EMS Bureau.*

- *With the purchase of considerable radio communications equipment through federal funding, there was an increased effort to coordinate the assignment of frequencies. Four EMS frequencies were incorporated in the Montana spectrum allocation: 155.280, 155.340, 155.325, and 155.385 MHz.*

3. FREQUENCY USAGE

Montana's four EMS frequencies and their uses are:

155.280 MHz - Primary hospital to ambulance communications frequency for use in a local area. Paging is not allowed on this frequency. As a simple naming convention, this is designated the WHITE channel. (See "Color Names", page 2 above.)

155.340 MHz - Regional hospital to ambulance communications frequency. To be used by an outlying ambulance when communicating with a regional medical control facility. This is designated the TAN channel.
Secondary Use: EMS interagency communications at an incident scene.

Montana EMS Communications Plan - (cont.)

3. FREQUENCY USAGE - (cont.)

155.325 MHz - *Central region (2A & 2B) dispatch and paging frequency. This is used to communicate between the ambulance service or other EMS responding agency and dispatch. The FCC has issued a waiver allowing alerting of EMS personnel on this frequency in Montana. Only EMS personnel may be alerted on this frequency. This is designated the GRAY channel.*
Secondary Use: EMS command communications in the western and eastern regions at an extended (mass casualty) incident scene.

155.385 MHz - *Western and eastern region (1A, 1B, 3A, & 3B) dispatch and paging frequency. This is used to communicate between the ambulance service or other EMS responding agency and dispatch. The FCC has issued a waiver allowing alerting of EMS personnel on this frequency in Montana. Only EMS personnel may be alerted on this frequency. This is designated the PINK channel.*
Secondary Use: EMS command communications in the central region at an extended (mass casualty) incident scene.

4. FREQUENCY AUTHORIZATION

The EMS frequencies can be licensed for base, base/mobile, or mobile only use by agencies or organizations qualifying as special emergency entities under FCC §90.35. All recognized emergency medical service providers in Montana qualify. Use is restricted to the classes of communications listed above.

The EMS Bureau maintains a statewide mobile-only license for the frequencies and can authorize mobile use to qualified entities unable to obtain a license themselves.

Part VII, "Management and Administration", of this manual contains further information on frequency use authorization by both license and interagency agreement, as well as contact information for the appropriate agencies.

5. RECOMMENDED CHANNEL CONFIGURATION

Radios purchased through federal funds were required to be compliant with this frequency allocation. To assure that channel numbers assigned to the frequencies in various EMS radios would be consistent, all federally purchased

Montana EMS Communications Plan - (cont.)

5. RECOMMENDED CHANNEL CONFIGURATION - (cont.)

radios were required to have the frequencies in the following channel configuration:

Channel 1	*155.280 MHz*	*Local Hospital to Ambulance*
Channel 2	*155.340*	*Regional Hospital to Ambulance*
Channel 3	*155.325*	*Central Region Dispatch & Paging*
Channel 4	*155.385*	*Western/Eastern Region Dispatch & Paging*

This channel configuration is still recommended, but is not mandatory.

Administrative rules of Montana require that a ground ambulance have a VHF mobile radio, and an air ambulance have a VHF portable radio with a minimum frequency of 155.280 MHz (WHITE). Effective January 1, 1996, each must have a minimum of:

- *Dual tone multi-frequency encoder*
- *Frequency 155.280 MHz (WHITE)*
- *Frequency 155.340 MHz (TAN)*
- *Frequency 155.325 MHz (GRAY)*
- *Frequency 155.385 MHz (PINK)*
- *Frequency 153.905 MHz (GOLD - State Common Mutual Aid)*

Non-transporting units must have the capability by January 1, 1996 of providing at least one radio at every emergency medical scene with a minimum of:

- *Frequency 155.280 MHz (WHITE)*
- *Frequency 155.340 MHz (TAN)*
- *Frequency 153.905 MHz (GOLD - State Common Mutual Aid)*

6. DTMF CODE ASSIGNMENT

The EMS Bureau has established and currently maintains a list of dual tone multi-frequency (DTMF) code assignments for base stations on the two ambulance-hospital frequencies (WHITE and TAN). Although codes have been assigned, there is no guarantee that the establishments listed below are using them or even the EMS frequencies - accuracy depends upon voluntary compliance. Requests for new assignments or reports of inaccuracies should be made to the EMS Bureau.

Montana DTMF Code Assignments

Area 1	*City*	*DTMF Code*
St. John's Lutheran Hospital	*Libby*	*010*
North Valley Hospital	*Whitefish*	*020*

Montana EMS Communications Plan - (cont.)

6. DTMF CODE ASSIGNMENT - (cont.)

Area 1 (cont.)	City	DTMF Code
Kalispell Regional Hospital	Kalispell	030
St. Joseph Hospital	Polson	040
St. Luke Community Hospital	Ronan	050
Clark Fork Valley Hospital	Plains	060
Holy Family Hospital	St. Ignatius	070

Area 2	City	DTMF Code
Granite County Hospital	Phillipsburg	075
Communications Dispatch Center	Missoula	911
St. Patrick's Hospital	Missoula	078
Missoula Community Hospital	Missoula	079
Seeley Lake Clinic	Seeley Lake	080
Mineral County Hospital	Superior	081
Daly Memorial Hospital	Hamilton	082
Powell County Memorial Hospital	Deer Lodge	083
Missoula General Hospital	Missoula	084

Area 3	City	DTMF Code
Madison Valley Hospital	Ennis	183
St. James County Hospital	Butte	184
Silver Bow General Hospital	Butte	185
Community Hospital	Anaconda	186
Barrett Hospital	Dillon	187
Galen State Hospital	Galen	189
Ruby Valley Hospital	Sheridan	190
Warm Springs State Hospital	Warm Springs	191

Area 4	City	DTMF Code
Deaconess Hospital	Bozeman	258
Livingston Memorial Hospital	Livingston	259
Boulder Dispatch Center	Boulder	260
Broadwater Hospital	Townsend	262

Area 5	City	DTMF Code
Columbus Hospital	Great Falls	340
Deaconess Hospital	Great Falls	341
Fort Harrison V.A. Hospital	Helena	350
St. Peters Hospital	Helena	352
Helena 911 Center	Helena	353
Mountainview Memorial Hospital	White Sulphur Springs	354

Montana EMS Communications Plan - (cont.)

6. DTMF CODE ASSIGNMENT - (cont.)

Area 6	*City*	*DTMF Code*
Memorial Hospital	*Cut Bank*	*450*
PHS Indian Hospital	*Browning*	*451*
Pondera County Hospital	*Conrad*	*452*
Teton Memorial Hospital	*Choteau*	*453*
Toole County Hospital	*Shelby*	*454*

Area 7	*City*	*DTMF Code*
Chouteau County District Hospital	*Fort Benton*	*517*
Northern Montana Hospital	*Havre*	*518*
Northern Montana Hosp. Local System	*Havre*	*519*
Rocky Boy Medical Center	*Rocky Boy*	*520*
Fort Belknap Medical Center	*Fort Belknap*	*521*
Liberty County Hospital	*Chester*	*523*
Big Sandy Medical Center	*Big Sandy*	*524*

Area 8	*City*	*DTMF Code*
Roundup Memorial Hospital	*Roundup*	*592*
Wheatland Memorial Hospital	*Harlowton*	*593*
Central Montana Hospital	*Lewistown*	*594*

Area 9	*City*	*DTMF Code*
Sweet Grass Community Hospital	*Big Timber*	*670*
Big Horn Community Memorial Hosp.	*Hardin*	*671*
PHS Indian Hospital	*Crow Agency*	*672*
Deaconess Hospital	*Billings*	*673*
St. Vincent's Hospital	*Billings*	*674*
Carbon County Memorial Hospital	*Red Lodge*	*675*
Stillwater Community Hospital	*Columbus*	*676*
Laurel Clinic	*Laurel*	*678*

Area 10	*City*	*DTMF Code*
Glendive Community Hospital	*Glendive*	*850*
McCone County Hospital	*Circle*	*851*
Garfield County Hospital	*Jordan*	*852*
Community Memorial Hospital	*Sidney*	*853*
Prairie Community Hospital	*Terry*	*854*

Area 11	*City*	*DTMF Code*
Roosevelt Memorial Hospital	*Culbertson*	*925*
Frances Mahone Deaconess Hospital	*Glasgow*	*926*
Phillips County Hospital Association	*Malta*	*927*

Montana EMS Communications Plan - (cont.)

6. DTMF CODE ASSIGNMENT - (cont.)

Area 11 (cont.)	City	DTMF Code
Sheridan Memorial Hospital	Plentywood	928
Poplar Community Hospital	Poplar	929
Daniels Memorial Hospital	Scobey	930
Trinity Hospital	Wolf Point	931

Incident Communications Plans

Emergency medical service providers rely on interagency communications more than any other type of public safety responder. An ambulance or QRU's radio communications are generally with public safety officials at an incident scene, with various dispatch centers, and hospitals. Montana EMS led the way in communications interoperability by early adoption of a common interagency plan and standardizing the use of VHF-high band frequencies over ten years ago.

The EMS Communications Plan presented above has developed over time to address needs for emergency medical service providers to communicate amongst themselves, hospitals, and dispatch points. Through the use of other mutual aid and common frequencies, inter-discipline (EMS-fire, EMS-law enforcement, etc.) communications can be equally well provided. The general incident communications plans presented in Part I of this manual incorporated EMS and the frequencies available to it. The remainder of this section is an expansion of those plans from an EMS point of view.

1. BASIC INTERAGENCY OPERATIONS

Emergency medical services typically work closely with their local public safety authorities and often have direct communications capabilities through use of local systems (repeaters, dispatch centers, etc.) When outside resources are needed or providers travel outside their own area, communications can be a problem unless the mutual aid and common frequencies are used effectively. They can also reduce the number of frequencies needed in a radio to contact the variety of responders EMS works with. Four channels are useful for basic interagency operations:

The GOLD channel (State Common Mutual Aid) is the primary public safety interagency channel in Montana. It is available to any agency, organization, or individual with a legitimate public safety responsibility.

The BLUE channel (National Law Enforcement Emergency) has been made available for installation in EMS mobile radios by agreement with the State of Montana. It is intended for emergency communications with law enforcement

Incident Communications Plans - (cont.)

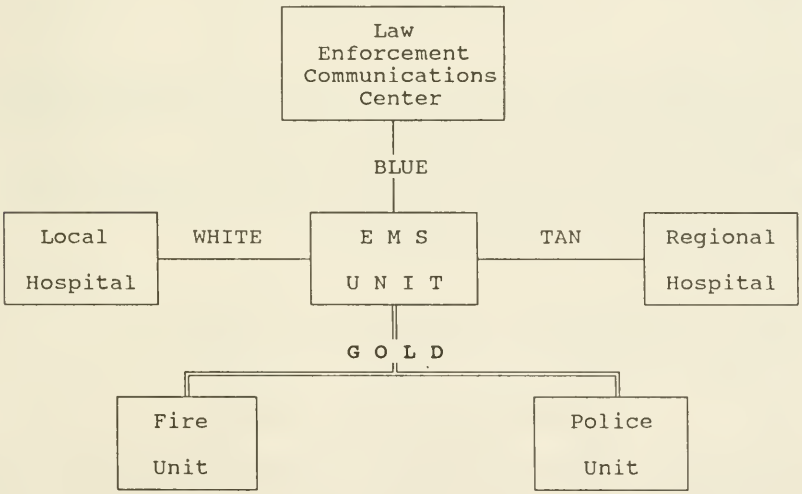
1. BASIC INTERAGENCY OPERATIONS - (cont.)

base stations and should not be used in place of the GOLD channel for mobile-mobile communications. It should be of particular value to units traveling outside their regular response areas.

The WHITE channel is for ambulance-hospital communications and retains that use for routine emergencies through the largest incidents.

The TAN channel is designated as the ambulance-regional hospital channel and secondarily for EMS interagency communications (ambulance service to ambulance service, QRU, etc.) during larger incidents.

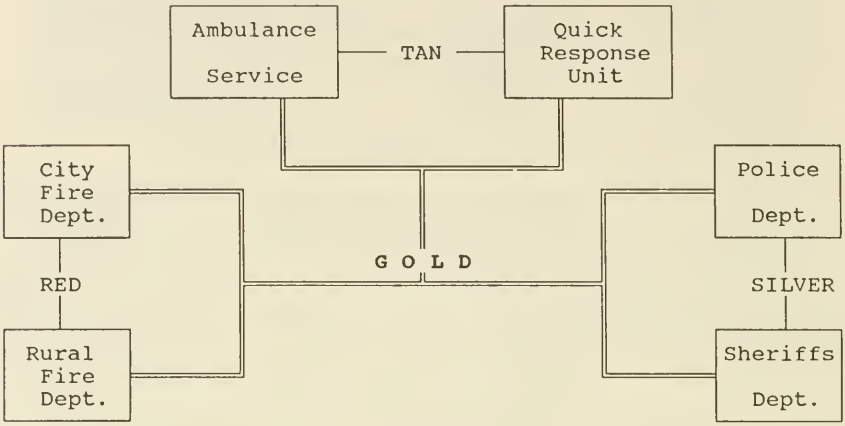
Depicted graphically, an example basic interagency communications plan for EMS response may look as such:



A slightly more complex incident may have more than one EMS unit on the scene. In such cases, a channel dedicated to on-scene, interagency EMS communications may be needed. The GOLD can be used between EMS units, but care should be taken not to overload it since it is the only mutual aid channel established for use between different public safety services. The TAN channel may be used for this purpose if it will not interfere with critical ambulance-regional hospital traffic. Excluding the base stations, the plan may appear as follows:

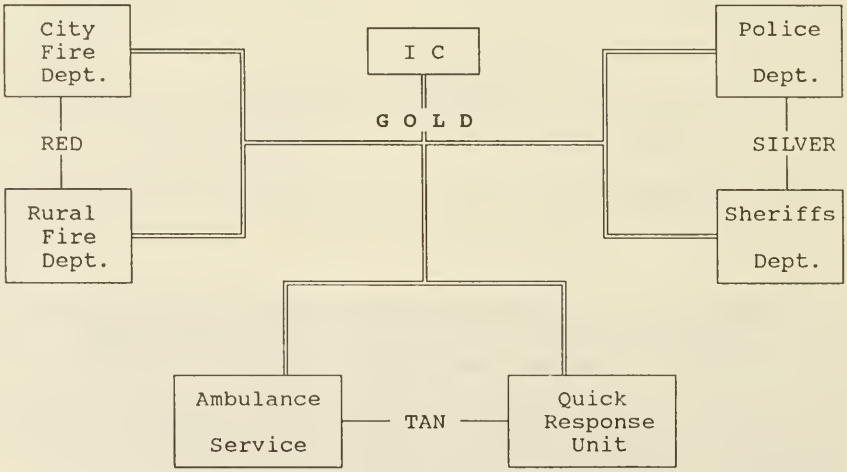
Incident Communications Plans - (cont.)

1. BASIC INTERAGENCY OPERATIONS - (cont.)



Here, each of the public safety services depicted have their own common channel to reduce congestion on the GOLD channel (RED and SILVER are the State Fire and Law Enforcement Mutual Aid channels, respectively).

Under the Incident Command System (ICS) which is finding favor among emergency responders of all types, an incident commander (IC) could use the GOLD channel to direct responding units, as such:

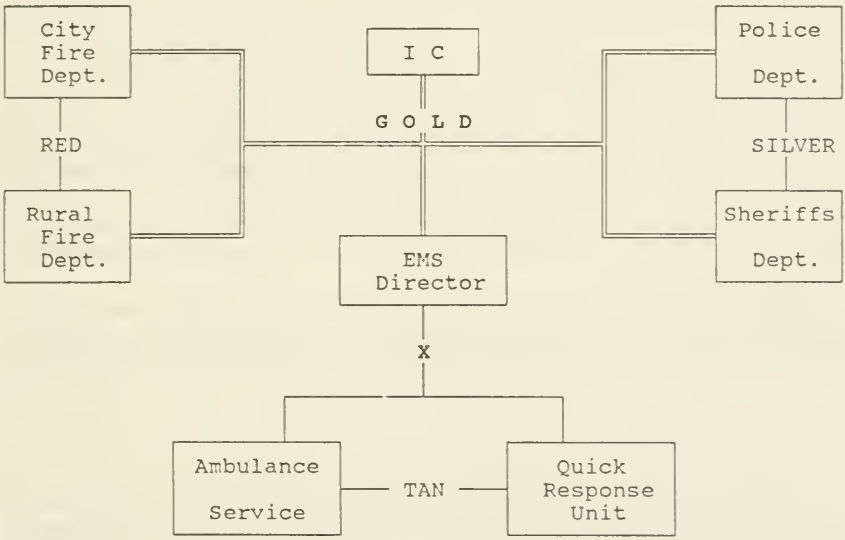


Incident Communications Plans - (cont.)

2. EXTENDED INCIDENTS

The communications plans above may need to be expanded for large incidents to include a separate EMS command channel. There are no hard rules as to when a command channel separate from the interagency channel is needed, but a need will likely exist when control of the individual EMS response units is not directly in the hands of the incident commander.

For example, a medical officer or EMS director may be designated at the scene of a mass casualty incident. The incident commander will not need nor want to talk and listen to all the responding units, so the separate command channel would be desireable. It may appear as such:



Where 'X' represents the off-region EMS dispatch and paging channel. The GRAY channel would be used for extended incident command in the western and eastern EMS regions (1A, 1B, 3A, & 3B); the PINK would be used in the central region (2A & 2B).

Since GRAY and PINK are normally used for dispatch and paging, the potential exists for interference with EMS extended command, especially in the counties bordering regions. Users are asked to recognize the potential and work together during these larger, more critical incidents to put the common frequencies to best use.

Part V - Disaster and Emergency Services

The radio capabilities of the state and local disaster and emergency services (DES) offices play a critical role in Montana's public safety communications. In many ways, DES and civil defense professionals have been at the forefront of developing technologies that allow radio communications across great distances, often with minimal equipment. The practical uses of these technologies are often tested under the worst conditions, when people need to communicate most.

Two DES radio communications means are discussed here: the S.E.C.U.R.E. (State Emergency Capability Using Radio Effectively) Network and the State mutual aid and common frequencies.

Montana DES Communications

1. S.E.C.U.R.E. NETWORK

The State of Montana S.E.C.U.R.E. Network uses HF frequencies and consists of 27 base stations located at Army National Guard Armories throughout the state plus seven mobile units. The mobiles are to be rapidly deployed to any part of the state while the base stations provide direct and/or relayed communications to the State Emergency Operations Center (EOC) in Helena. All base station locations have emergency power.

The Disaster and Emergency Services Division of the Department of Military Affairs is the designated administrator of this radio network and is responsible for drills, exercises, and tests conducted at 0900 hrs. local time every Tuesday.

2. STATE MUTUAL AID AND COMMON FREQUENCIES

Montana's disaster and emergency management officials can make good use of two VHF-high band public safety frequencies in carrying out their responsibilities. They are:

153.905 MHz - GOLD - State Common Mutual Aid

155.820 MHz - BROWN - State DES Direction and Control

(See Part I, "Color Names", for more information on color naming of frequencies.)

The GOLD channel is available for mobile (including portable) use through agreement with the Department of Administration, which holds a statewide license on it. It is also available for low-powered base station licensure directly with the FCC for those eligible in the Local Government Radio Service (FCC §90.19a).

Montana DES Communications - (cont.)

2. STATE MUTUAL AID AND COMMON FREQUENCIES - (cont.)

Since all public safety providers can use this frequency, it is valuable to emergency managers who may need to contact a wide variety of responders. Base stations for support of an emergency operations center (EOC) with local area coverage can be particularly valuable. Part I of this manual contains further information on using GOLD base stations.

The BROWN channel is available for mobile and/or base licensure directly with the FCC. It is not licensed statewide for access by agreement, so is not considered a mutual aid channel, proper. Each agency using the frequency must hold a license authorizing use and each base station must be listed specifically. A licensee can authorize another agency's mobile access to the frequency for communications with itself, the licensee.

The BROWN channel is for emergency management communications by elected or appointed officials of the executive branch of government, emergency response agency department heads and supervisors, and other department heads who have specific emergency assignments. It is for communications essential to direction and control needs during a disaster or emergency situation.

Licensing Frequencies

Both the GOLD and BROWN frequencies are in the FCC Local Government Radio Service. The Associated Public-Safety Communications Officers (APCO) has been designated as coordinator for this service by the FCC. Applications for license are submitted to the APCO Automated Frequency Coordination office for processing before being sent to the FCC.

APCO uses local advisors in each state for much of the actual coordination work. The Montana Frequency Advisory Committee (MFAC) of the state APCO chapter approves applications forwarded to it from the national APCO office. MFAC also considers applications through a "pre-approval" process whereby it and the applicant can look for agreeable solutions to communications needs. Part VII, "Management and Administration", covers details of obtaining authorization on Montana's mutual aid and common frequencies.

Part VI - Search and Rescue

Under Montana law, the sheriff of each county is responsible for the provision of search and rescue services within his jurisdiction. Most sheriffs departments in the state pass a large share of this responsibility on to private groups of volunteers. These groups, of which 50-60 identify themselves as search and/or rescue (SAR) organizations, rely on radio communications a great deal in rendering their life-saving skills. Often they make use of the sheriffs radio system and many hold their own licenses in the FCC Special Emergency Radio Service.

Mutual aid and common radio is available to SAR groups for communication with others involved in the same activity as well as with other public safety service providers. Three are available :

*153.905 MHz - **GOLD** - State Common Mutual Aid*

*155.160 MHz - **VIOLET** - National Search and Rescue*

*155.220 MHz - **PURPLE** - State Search and Rescue*

(See Part I, "Color Names", for more information on color naming of frequencies.)

*Search and rescue groups are eligible to enter into agreement with the State of Montana, Department of Administration, for use of the **GOLD** channel for communications with public safety radio users other than search and rescue. The **VIOLET** and **PURPLE** channels can be licensed directly with the FCC for communications with other SAR users. They are discussed further below.*

Some SAR groups may be eligible for authorization by license or agreement to use EMS, fire, or law enforcement frequencies based on their particular functions. Generally speaking, though, they are limited by FCC definitions of eligibility for those services.

Common Frequency Use

As was covered in the first section of this manual, common frequencies are distinguished from mutual aid by the fact the latter are licensed statewide by the State of Montana which then provides access by agreement. Common frequencies are available for licensing by each organization. Users must either be licensed for the common frequency or have an agreement authorizing communications on the frequency with a license holder, from the license holder.

*SAR groups interested in using either the **PURPLE** or **VIOLET** channels are best advised to have their own license.*

Common Frequency Use - (cont.)

1. STATE SEARCH AND RESCUE

The frequency 155.220 MHz has been recognized for almost ten years as the primary common channel for communications between SAR groups in Montana. When it doesn't interfere with interagency communications, it may be used by a group for communications between its own radio users. The section on incident communications plans below suggests some appropriate uses of this channel.

Paging and the use of tone-coded squelch are strongly discouraged on this as well as all mutual aid and common channels.

2. NATIONAL SEARCH AND RESCUE

The National Association of Search and Rescue officially promoted the use of 155.160 MHz as the nationwide SAR frequency in the early 1970's. Though it has been given no official recognition as such, the frequency has been licensed widely for SAR and some organizations hold multi-state and even regional licenses. In Montana, it may be used for communications between units of a licensee when such use doesn't interfere with interagency communications.

Paging and the use of tone-coded squelch are strongly discouraged on this as well as all mutual aid and common channels.

Law Enforcement Frequency Use by Agreement

Search and rescue groups may wish to obtain agreements from law enforcement agencies they work with allowing access to the latter's frequencies. FCC rules allow such agreements where a licensee can consider an outside unit as one of its own for communications with it, the licensee. Law enforcement agencies commonly do this to allow a degree of communications interoperability with those they regularly need to work with.

Access by agreement is left entirely to the discretion of the licensee. Agreements are not always the best answer to communications interoperability between individual organizations, especially where mutual aid radio is well established.

Licensing Frequencies

Special Emergency Radio Service (SERS) frequencies are available to search and rescue groups, as we know them, under FCC §90.37, "Rescue Organizations". This section also restricts organizations to one base station, one mobile for each vehicle actually used in operations, and two portables for each radio equipped vehicle. These restrictions notwithstanding, the shortage of frequencies in this service is the biggest impediment to licensing at this time.

Licensing Frequencies - (cont.)

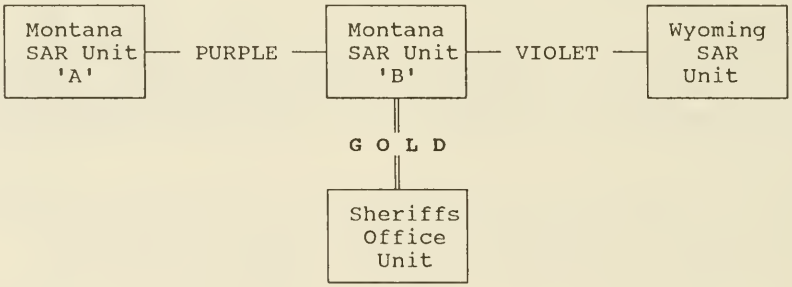
In the VHF-high band, there are thirteen SERS frequencies for base and mobile use. Six of these are effectively unavailable to search and rescue because they are limited to EMS use. VIOLET and PURPLE are two of the remaining seven in the band, leaving five frequencies to be shared between SAR groups, veterinarians, disaster relief organizations, school buses, beach patrols, establishments in isolated areas, and, in some cases, communications common carriers. Needless to say, a licensee is rarely an exclusive user in the Special Emergency Radio Service.

The FCC has designated the National Association of Business and Educational Radio (NABER) as SERS frequency coordinator. This organization, based in Alexandria, Virginia, does not use a local frequency advisor in the state for coordination. Its address and phone numbers are provided in the next part of this manual.

Incident Communications Plans

The incident communications plans to be presented here for search and rescue are simple and only intended to suggest uses of the GOLD, VIOLET, and PURPLE channels. See Part I above for larger plans incorporating other mutual aid and common frequencies.

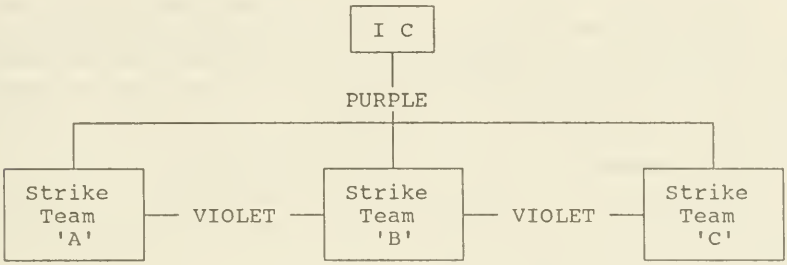
The simplest interagency communications plan for SAR would have a group using the PURPLE channel for traffic to/from other Montana groups, the VIOLET channel to/from non-Montana groups, and the GOLD channel for communications with non-SAR, Montana public safety entities. Graphically it may appear as this:



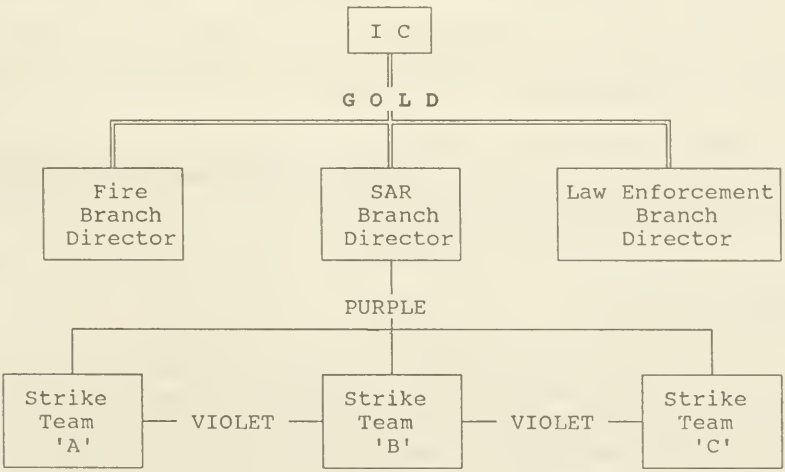
In a multi-agency search or rescue operation, a hierarchical command structure, such as the Incident Command System, may arise along with the need for a SAR command net. The PURPLE channel is suggested as the first choice for such use so that the VIOLET channel is still available if resources from outside the state are involved. If resources from outside Montana are unlikely to become involved, VIOLET may be suitable for lateral communications between functional divisions.

Incident Communications Plans - (cont.)

A communications plan for a purely SAR mission, with an incident commander (IC), may appear as this:



Multi-agency incidents that involve public safety entities outside of search and rescue may require the use of the GOLD channel. Since it is available to SAR, law enforcement, and EMS among others, it is appropriately used at the highest operational level of an incident. The most complex SAR plan to be offered here may appear as this:



Part VII - Management and Administration

Montana Codes Annotated 2-17-312 gives the Department of Administration responsibility for developing policies and procedures for the management of mutual aid frequencies. Frequency utilization plans for all of the mutual aid and most of the common frequencies have been developed by the Information Services Division of the Department of Administration and are attached to this document as Appendices B - H. Official policies and procedures for law enforcement and fire mutual aid frequencies are attached as Appendices I and J, respectively.

Authority to transmit on a radio frequency comes through either interagency agreement with a license holder or from direct license (with the FCC, in the case of state and local public safety). Generally speaking, access by agreement allows only communications with the license holder.

The Department of Administration holds statewide licenses for the seven mutual aid frequencies identified in this manual. They are held to allow other eligible users access to the frequencies by agreement. This access allows users to communicate with each other, not just with the license holder. This distinguishes mutual aid as implemented in Montana from all other radio frequencies.

The sections below cover details of interagency agreements, licensing mutual aid base stations and common frequencies, and contacts for matters involving these frequencies.

Interagency Agreements

Mutual aid agreements, for radio sharing and otherwise, reflect the critical dependence public entities have on one another. When made to share access to radio frequencies and systems, they can provide the communications interoperability essential to coordinated public safety response.

1. Individual Agencies

A radio frequency license holder with mobile authorization can agree to consider one or more mobile units of another agency as its own for use of the frequency, for communications with itself, the license holder. The non-licensed user is bound by all restrictions of the license such as power output and range of operation. The license holder may establish further restrictions as conditions of the agreement.

It should be understood that license to operate on a given frequency does not necessarily give the license holder authority to communicate on the frequency with other licensees. This is referred to as intersystems use and is restricted by the FCC. Mutual aid and common frequencies are primarily intended for such use. Standard agreements between individual agencies give outside units access to a

Interagency Agreements - (cont.)

1. Individual Agencies - (cont.)

system for communications with the license holder. Access is limited to mobile (including portable) transmitters.

Appendix K of this manual contains selected FCC Part 90 Rules and Regulations, Private Land Mobile Radio, including §90.421 which authorizes access by agreement. Appendix L contains a sample interagency agreement.

2. State of Montana Licensed Frequencies

The State of Montana has the following frequencies licensed statewide for mutual aid use:

153.905 MHz	*GOLD*	*State Common Mutual Aid*
154.070	*RED*	*State Fire Mutual Aid*
154.265	*CORAL*	*State Fire Ground #1*
154.280	*MAROON*	*State Fire Command and Control*
154.295	*SCARLET*	*State Fire Ground #2*
155.475	*BLUE*	*National Law Enforcement Emergency*
155.790	*SILVER*	*State Law Enforcement Mutual Aid*

Mobile access by agreement to these frequencies is provided by the Department of Administration, Information Services Division. Temporary base station authority can also be provided for the MAROON and BLUE frequencies.

3. Other Statewide Licensed Frequencies

The Department of State Lands and the U.S. Forest Service have common frequencies licensed statewide that are available for access by agreement for communications with their units.

Mobile access to the YELLOW frequency is available to those who need to communicate with Department of State Lands units. Requests should be submitted on agency or organization letterhead to the nearest DSL area Land Offices. Addresses are listed in the next section.

Mobile access to the GREEN frequency is available to those who need to communicate with U.S. Forest Service units. It is licensed statewide by both the USFS and the Department of State Lands. Requests can be submitted either as they are for the YELLOW channel or to the USFS Region 1 Headquarters in Missoula. Addresses are listed in the next section.

Radio Licensing

Montana mutual aid and common frequencies can be licensed by individual agencies under certain conditions. Frequency plans adopted by the Department of Administration now allow base stations on some mutual aid frequencies. Official use plans for some common frequencies now allow base and mobile licensing.

1. Mutual Aid Base Stations

*The **GOLD** and **SILVER** frequencies can be licensed for base station use with the FCC through APCO, the Associated Public-Safety Communications Officers. Licensure and use must be in accordance with the frequency plans included here as Appendices B and D, respectively. The Department of Administration has adopted policies and procedure which further affect eligibility for and use of the SILVER channel. See Appendix I.*

*The **BLUE** frequency is available for installation in base stations, but all authorization is done through State of Montana licenses. The Department of Administration authorizes the bases then licenses them permanently under the name of the State through APCO.*

The Information Services Division of the Department of Administration handles all Montana mutual aid radio agreements.

2. Common Frequencies

Common frequencies, as defined earlier in this manual, are distinguished from mutual aid by the fact they are not licensed statewide for communications between non-licensed users. The nine identified here are:

155.820 MHz	*BROWN*	*State DES Direction and Control*
155.160	*VIOLET*	*National Search and Rescue*
155.220	*PURPLE*	*State Search and Rescue*
155.280	*WHITE*	*State Local Hospital to Ambulance*
155.340	*TAN*	*State Regional Hospital to Ambulance*
155.325	*GRAY*	*EMS Central Region Dispatch & Paging*
155.385	*PINK*	*EMS East/West Region Dispatch & Paging*
151.220	*YELLOW*	*State Forestry - Department of State Lands*
171.475	*GREEN*	*U.S. Forest Service Common*

*Common frequencies must either be licensed by the user or accessed by agreement with a licensee, for communications with that licensee. Two are only available through the agreements: **YELLOW** and **GREEN**. The other seven are available under conditions of the frequency utilization plans attached here as appendices.*

Radio Licensing - (cont.)

2. Common Frequencies - (cont.)

BROWN is an FCC Local Government frequency coordinated by APCO. Applications for license are submitted through that organization.

VIOLET and PURPLE are FCC Special Emergency frequencies coordinated by the National Association of Business and Educational Radio (NABER). Applications for license are submitted through that organization.

WHITE, TAN, GRAY, and PINK are also Special Emergency frequencies and coordinated and licensed with the FCC through NABER.

Contact Agencies, Organizations, and Bodies

The following sections provide contact information for mutual aid and common frequency management, licensing, and oversight.

1. Mutual Aid Frequencies

Montana mutual aid radio frequencies are managed by the Information Services Division of the Department of Administration. It publishes reference materials, issues access agreements, coordinates policy, and addresses abuse problems. Requests for mutual aid access or routine temporary base authorization must be in writing; emergency requests may be phoned or faxed in.

Public Safety Radio
Department of Administration - ISD
Mitchell Building - Room 219
Helena, MT 59620
Phone: (406) 444-2586
Fax : (406) 444-5545

2. Common Frequencies

The Department of State Lands can issue access agreements for the common frequencies it licenses statewide. Contact the nearest Land Office.

Southern Land Office
Department of State Lands
528 S. Moore Lane
Billings, MT 59101
(406) 259-3264

Eastern Land Office
Department of State Lands
321 Main St - Suite 5
Miles City, MT 59301
(406) 232-2034

Contact Agencies, Organizations, and Bodies - (cont.)

2. Common Frequencies - (cont.)

Northeastern Land Office
Department of State Lands
613 N.E. Main Street
Lewistown, MT 59457
(406) 538-5989

Central Land Office
Department of State Lands
8001 N. Montana Ave.
Helena, MT 59601
(406) 444-3633

Southwestern Land Office
Department of State Lands
1401 - 27th Ave.
Missoula, MT 59801
(406) 542-4200

Northwestern Land Office
Department of State Lands
2250 Highway 93 North
Kalispell, MT 59903
(406) 752-7994

The Emergency Medical Services Bureau of the Department of Health and Environmental Sciences maintains statewide licenses on the WHITE, TAN, GRAY, and PINK channel. It oversees the EMS Communications Plan and assigns DTMF codes for base stations under it. Access agreements for the frequencies may be issued by the EMS Bureau in instances where the prospective user is unlikely to license the frequencies, but needs access.

Emergency Medical Services Bureau
Department of Health and Environmental Sciences
Cogswell Building - Room C204
Helena, MT 59620

Phone: (406) 444-3895

The Disaster and Emergency Services Division of the Department of Military Affairs maintains a statewide mobile and Helena base station license on the BROWN channel. It administers the S.E.C.U.R.E. Network of HF radios and oversees the State disaster communications plans.

Disaster and Emergency Services Division
Department of Military Affairs
1100 North Last Chance Gulch
Helena, MT 59620

Phone: (406) 444-6911

Other questions about Montana's common public safety frequencies can be referred to the Information Services Division of the Department of Administration at the address listed above.

Contact Agencies, Organizations, and Bodies - (cont.)

3. Frequency Licensing

The Federal Communications Commission (FCC) is responsible for licensing and policing all state and local public safety frequencies. The FCC Private Radio Bureau handles land mobile communications, including public safety. It relies on various private user organizations to coordinate the separate frequency services and to provide a good deal of license preprocessing. The official frequency coordination organizations are listed on the next page.

Private Radio Bureau
Federal Communications Commission
2025 M St., N.W.
Washington, DC 20554
(202) 632-6940

Land Mobile & Microwave Division	*(202) 632-7597*
Rules Branch	*(202) 634-2443*
Compliance Branch	*(202) 632-7125*

Licensing Division
Route 116
Gettysburg, PA 17325
(717) 337-1212

Land Mobile Branch	*(717) 337-1411*

FCC District Field Office (includes Montana)
One Newport - Room 414
3605 132nd Ave., S.E.
Bellevue, WA 98006
(206) 764-3324

The FCC-designated frequency coordination organizations are generally the first point of contact for someone wishing to license a radio frequency. Each charges a coordination fee for its services in addition to collecting any FCC fees.

Montana mutual aid and common frequencies available for licensing fall into four frequency services, handled by three different coordinators. Only APCO uses local advisors in each state for application assessment.

Contact Agencies, Organizations, and Bodies - (cont.)

3. Frequency Licensing - (cont.)

Local Government Radio Service - FCC Service Code PL
Police Radio Service - FCC Service Code PP

Associated Public-Safety Communications Officers (APCO)
Frequency Coordination Department
P.O. 280
New Smyrna Beach, FL 32170
(904) 426-1510

Montana Frequency Advisory Committee
c/o Information Services Division
Mitchell Building - Room 219
Helena, MT 59620
(406) 444-2586

Fire Radio Service - FCC Service Code PF

International Association of Fire Chiefs/
International Municipal Signal Association (IAFC/IMSA)
200 Metro Center Blvd.
Warwick, RI 02886
(401) 738-2220

Special Emergency Service - FCC Service Code PS

National Association of Business and Educational Radio (NABER)
1501 Duke St.
Alexandria, VA 22314
(703) 739-0300

Management of federal radio frequencies is the responsibility of the Interdepartmental Radio Advisory Committee (IRAC), which functions under the National Telecommunications Information Administration of the U.S. Department of Commerce. While state and local agencies are not eligible for authorization in the federal spectrum, IRAC and the NTIA may be able to provide valuable information for shared operations or interference problems.

Interdepartmental Radio Advisory Committee (IRAC)
U.S. Department of Commerce, NTIA
Room 1605, HCHB Building
14th & Constitution Avenue, N.W.
Washington, DC 20230

Contact Agencies, Organizations, and Bodies - (cont.)

4. Montana Mutual Aid Frequencies Steering Bodies

The Department of Administration relies on steering of mutual aid and common frequencies policy by three bodies: the General Frequency Oversight Council, the Law Enforcement Frequencies Council, and the Fire Frequencies Council.

The General Frequency Oversight Council has the following membership:

Chairman of the Law Enforcement Frequencies Council
Chairman of the Fire Frequencies Council
Chairman of APCO's Montana Frequency Advisory Committee
Frequency Manager for the Information Services Division

The Law Enforcement Frequencies Oversight Council is composed of one representative from the following organizations:

Montana Sheriffs and Peace Officers Association
Montana Association of Chiefs of Police
Montana Highway Patrol

A member of APCO's Montana Frequency Advisory Committee may be seated with the council for technical advice and direction.

The Fire Frequencies Oversight Council is composed of the following representatives:

Department of State Lands, Fire Management Bureau	*- one person*
Department of Justice, Fire Marshal Bureau	*- one person*
University System, Fire Services Training School	*- one person*
Montana State Volunteer Firefighters Association	*- two persons*
Montana Fire Chiefs Association	*- two persons*

A member of APCO's Montana Frequency Advisory Committee may be seated with the council for technical advice and direction.

Information on the current members of these councils can be obtained from the Information Services Division.

INCIDENT RADIO COMMUNICATIONS PLAN

1. INCIDENT NAME: SAMPLE PLAN 'A'
2. DATE TIME PREPARED:
3. OPERATIONAL PERIOD DATE TIME:

4. BASIC RADIO CHANNEL UTILIZATION

SYSTEM CACHE	CHANNEL	FUNCTION	FREQUENCY	ASSIGNMENT	REMARKS
	GOLD	COMMAND	153.905	ALL UNITS	
	RED	Interagency Fire	154.070	ALL FIRE UNITS	
	SILVER	Intramgency Law Enforcement	155.790	ALL LAW Enforcement UNITS	
	TAN	Interagency EMS	155.340	ALL EMS UNITS	

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5. PREPARED BY (COMMUNICATIONS UNIT)

INCIDENT RADIO COMMUNICATIONS PLAN

1. INCIDENT NAME: SAMPLE PLAN 'B'
2. DATE TIME PREPARED:
3. OPERATIONAL PERIOD DATE TIME:

4. BASIC RADIO CHANNEL UTILIZATION

SYSTEM CACHE	CHANNEL	FUNCTION	FREQUENCY	ASSIGNMENT	REMARKS
	GOLD	INCIDENT COMMAND	153.905	INCIDENT COMMAND, ALL COMMANDERS	
	RED	INTERAGENCY FIRE	154.070	ALL FIRE COMMANDERS	
	SILVER	INTERAGENCY LAW ENFORCEMENT	155.790	ALL LE COMMANDERS	
	X	EMS BRANCH DIRECTION	*	EMS DIRECTOR, ALL EMS COMMANDERS	* CHANNEL X IS THE OFF-REGION EMS DISPATCHING AND PAGING FREQUENCY
	TAN	INTERAGENCY EMS	155.340	EMS UNITS	
	A	CITY FD TACTICAL	[CITY FD FREQUENCY]	CITY FD UNITS	
	B	RFD TACTICAL	[RFD FREQUENCY]	RFD UNITS	
	C	PD TACTICAL	[PD FREQUENCY]	PD UNITS	
	D	SO TACTICAL	[SO FREQUENCY]	SO UNITS	

205 ICS 8-78

5. PREPARED BY (COMMUNICATIONS UNIT)

INCIDENT RADIO COMMUNICATIONS PLAN	1. INCIDENT NAME: SAMPLE PLAN 'C'	2. DATE/TIME PREPARED	3. OPERATIONAL PERIOD DATE/TIME

4. BASIC RADIO CHANNEL UTILIZATION

SYSTEM/CACHE	CHANNEL	FUNCTION	FREQUENCY	ASSIGNMENT	REMARKS
	BROWN	INCIDENT COMMAND	155.820	Incident Commander, COMMAND STAFF SECTION CHIEFS	
	GOLD	OPERATIONS DIRECTION	153.905	OPERATIONS CHIEF, ALL BRANCH DIRECTORS	
	MAROON	FIRE BRANCH DIRECTION	154.280	FIRE BRANCH DIRECTOR, ALL FIRE SUPERVISORS	
	RED	INTERAGENCY FIRE	154.070	ALL FIRE SUPERVISORS	
	BLUE	LE BRANCH DIRECTION	155.475	LE BRANCH DIRECTOR, ALL LE SUPERVISORS	
	SILVER	INTERAGENCY LAW ENFORCEMENT	155.790	ALL LE SUPERVISORS	
	X	EMS BRANCH DIRECTION	*	EMS BRANCH DIRECTOR, ALL EMS SUPERVISORS	* CHANNEL X is THE OFF-REGION EMS DISPATCH AND PAGING FREQUENCY
	TAN	INTERAGENCY EMS	155.340	ALL EMS SUPERVISORS	

205 ICS 8-78

5. PREPARED BY (COMMUNICATIONS UNIT)

MONTANA MUTUAL AID RADIO

State Common Mutual Aid Frequency Plan

PURPOSE

To establish a statewide mutual aid frequency for common use by all public safety responders within Montana. It is established by authority of Montana Codes Annotated 2-17-312 and in accordance with Federal Communications Commission (FCC) Rules and Regulations, Part 90.17, using the frequency 153.905 MHz.

ELIGIBILITY

The following will be eligible to use 153.905 within Montana, subject to applicable FCC Rules and Regulations. Further rules and regulations affecting eligibility may be established by an advisory council to the Montana Department of Administration.

STATE OF MONTANA: The State of Montana, Department of Administration, Information Services Division shall maintain a statewide mobile license for this frequency to allow other eligible users mobile access by agreement. It may license base stations on this frequency for state agency use consistent with this plan.

OTHER USERS: Any agency, organization, or other entity engaged in the provision of public safety services shall be eligible to enter into agreement with the State of Montana for access to this frequency by agreement.

Bases: Any state agency, county, city, town or similar governmental entity eligible to hold authorization to operate radio stations under FCC Rules and Regulations, Part 90.17 Local Government Radio Service, is eligible to license the frequency 153.905 for base station use. Base stations will be limited to 100 watts of nominal power and antennas to 20 feet or less in height above ground or an existing building.

USAGE

The Montana common mutual aid frequency is established exclusively for interagency communications in support of public safety.

MONTANA MUTUAL AID RADIO

National Police Emergency Frequency Plan

PURPOSE

To establish a statewide law enforcement emergency communications network within Montana under Federal Communications Commission (FCC) Rules and Regulations, Part 90.19, using the frequency 155.475 MHz.

ELIGIBILITY

The following will be eligible to use 155.475 within Montana. Further rules and regulations affecting eligibility may be established by an advisory council to the Montana Department of Administration.

STATE OF MONTANA: The State of Montana, Department of Administration, Information Services Division shall maintain a statewide, fixed base and mobile license for this frequency to allow other eligible users mobile and/or temporary base station access by agreement. The State shall maintain all base station authorizations on this frequency under its license.

LAW ENFORCEMENT: Except for itinerant federal law enforcement vehicles, a police agency must be a licensee in the police or local government service in order to be eligible to use this frequency.

Bases: Any law enforcement agency in the state meeting the above conditions shall be eligible to obtain base station authorization under the State's license on this frequency, subject to applicable FCC Rules and Regulations. All 24 hour law enforcement communications centers will be encouraged to install bases on 155.475.

Mobile: Any law enforcement agency may enter into agreement with the State of Montana to be included under their mobile license.

OTHERS: Non-police agencies may maintain mobile radios on this frequency only as established here and only for emergency communications as outlined below.

Ambulances: An ambulance may enter into agreement with the State of Montana to be included under their mobile license for use statewide.

School Buses: Upon approval of the county sheriff, a school district may enter into agreement with the State of Montana to be included under their mobile license for use statewide in the district's school buses.

USAGE

The Montana police emergency radio network is established exclusively for interagency emergency and itinerant law enforcement communications.

MONTANA MUTUAL AID RADIO

State Law Enforcement Mutual Aid Frequency Plan

PURPOSE

To establish a statewide mutual aid frequency for interagency law enforcement communications within Montana. It is established by authority of Montana Codes Annotated 2-17-312 and in accordance with Federal Communications Commission (FCC) Rules and Regulations, Part 90.19, using the frequency 155.790 MHz.

ELIGIBILITY

The following will be eligible to use 155.790 within Montana, subject to applicable FCC Rules and Regulations. Further rules and regulations affecting eligibility may be established by an advisory council to the Montana Department of Administration.

STATE OF MONTANA: The State of Montana, Department of Administration, Information Services Division shall maintain a statewide mobile license for this frequency to allow other eligible users mobile access by agreement. It may license base stations on this frequency for state law enforcement agency use consistent with this plan.

LAW ENFORCEMENT: Except for itinerant federal law enforcement vehicles, a police agency must be a licensee in the police or local government service in order to be eligible to use this frequency.

Bases: Any law enforcement agency in the state meeting the above conditions and having a base station installed on the frequency 155.475 MHz shall be eligible to license a base station on this frequency.

Mobile: Any law enforcement agency in the state meeting the above conditions shall be eligible to obtain a mobile license on this frequency. Any law enforcement agency unlicensed on this frequency may alternately enter into agreement with the State of Montana to be included under their mobile-only license.

USAGE

The Montana law enforcement mutual aid frequency is established exclusively for law enforcement dispatch-to-dispatch communications and tactical operations.

MONTANA MUTUAL AID RADIO

Fire Frequencies Plan

PURPOSE

To establish statewide fire mutual aid frequencies for interagency itinerant and emergency communications within Montana. They are established by authority of Montana Codes Annotated 2-17-312 and in accordance with Federal Communications Commission (FCC) Rules and Regulations, Part 90.21, using the frequencies 154.070, 154.265, 154.280, and 154.295 MHz.

ELIGIBILITY

The following will be eligible to use fire mutual aid frequencies within Montana. Further rules and regulations affecting eligibility may be established by an advisory council to the Montana Department of Administration.

STATE OF MONTANA: The State of Montana, Department of Administration, Information Services Division shall maintain a statewide, temporary fixed base and mobile license for the frequency 154.280 MHz to allow other eligible users mobile and/or temporary base station access by agreement. It shall also maintain a statewide mobile license for the frequencies 154.070, 154.265, and 154.295 MHz to allow other eligible users access by agreement.

FIRE SERVICES: Except for itinerant federal entities, a fire protection organization or agency must be a licensee in the fire or local government FCC service in order to be eligible to use these frequencies.

Bases: Any fire service entity in the state meeting the above conditions shall be eligible to obtain base station authorization on the frequency 154.280, subject to applicable FCC Rules and Regulations. No permanent base stations shall be allowed on 154.070, 154.265, or 154.295 MHz.

Mobile: Any fire service entity may enter into agreement with the State of Montana to be included under their mobile license. Those licensing bases on 154.280 MHz may alternately include their own mobiles under that license.

USAGE

The Montana fire mutual aid frequencies are established exclusively for interagency emergency and itinerant fire services communications.

MONTANA MUTUAL AID RADIO

EMS Frequencies Plan

PURPOSE

To establish statewide emergency medical services (EMS) common frequencies for interagency itinerant and emergency communications within Montana. The frequencies 155.280, 155.340, 155.325, and 155.385 MHz are so established by authority of Montana Codes Annotated 2-17-312 and in accordance with Federal Communications Commission (FCC) Rules and Regulations, Part 90.

ELIGIBILITY

All Montana emergency medical service providers are eligible to license the Special Emergency Radio Service frequencies 155.280, 155.340, 155.325, and 155.385 for the uses approved here. Further rules and regulations affecting eligibility may be established by an advisory council to the Montana Department of Administration.

USAGE

The Montana EMS common frequencies are established exclusively for EMS interagency emergency and itinerant communications. The use of each frequency is as follows:

155.280 MHz - *Local hospital - ambulance communications. Paging is not allowed.*

155.340 MHz - *Regional hospital - ambulance communications. Secondarily, EMS interagency communications at an incident scene.*

155.325 MHz - *Central region (2A & 2B) dispatch and paging. Secondarily, EMS command communications in the western and eastern regions at an extended (mass casualty) incident scene.*

155.385 MHz - *Western and eastern region (1A, 1B, 3A, & 3B) dispatch and paging. Secondarily, EMS command communications in the central region at an extended (mass casualty) incident scene.*

MONTANA MUTUAL AID RADIO

DES Direction and Control Frequency Plan

PURPOSE

To establish a statewide common frequency for interagency direction and control communications during disaster or emergency situations. The frequency 155.820 MHz is so established by authority of Montana Codes Annotated 2-17-312 and in accordance with Federal Communications Commission (FCC) Rules and Regulations, Part 90.

ELIGIBILITY

The following will be eligible to use the DES Direction and Control Frequency within Montana. Further rules and regulations affecting eligibility may be established by an advisory council to the Montana Department of Administration.

STATE OF MONTANA: The State of Montana, Department of Administration, Information Services Division and the Department of Military Affairs, DES Division shall be eligible to license 155.820 MHz statewide for mobile, temporary fixed base, and temporary fixed mobile relay use for the purposes set forth in this plan. The DES Division shall be eligible to license the frequency for fixed mobile relay (FB2) use to support operation of the State Emergency Operations Center for the purposes set forth in this plan. The frequency 153.965 MHz is reserved statewide as the input frequency for these relays and for future expansion of DES communications.

OTHER GOVERNMENT ENTITIES: Any state agency, county, city, town or similar governmental entity eligible to hold authorization to operate radio stations under FCC Rules and Regulations, Part 90.17 Local Government Radio Service, is eligible to license the frequency 155.820 for base and/or mobile use, subject to all FCC Rules and Regulations.

USAGE

The Montana DES Direction and Control Frequency is established exclusively for emergency management communications by elected or appointed officials of the executive branch of government, emergency response agency department heads and supervisors, and other department heads who have specific emergency assignments. It is for communications essential to direction and control needs during a disaster or emergency situation.

MONTANA MUTUAL AID RADIO

Search and Rescue Frequencies Plan

PURPOSE

To establish statewide search and rescue common frequencies for interagency emergency communications within Montana. The frequencies 155.160 and 155.220 MHz are so established by authority of Montana Codes Annotated 2-17-312 and in accordance with Federal Communications Commission (FCC) Rules and Regulations, Part 90.

ELIGIBILITY

The following will be eligible to use search and rescue common frequencies within Montana. Further rules and regulations affecting eligibility may be established by an advisory council to the Montana Department of Administration.

SEARCH AND RESCUE ORGANIZATIONS: Persons or organizations eligible to hold radio station authorization under FCC §90.37, to wit, those operating a rescue squad, are eligible to use Montana search and rescue common frequencies. Lost person search units are considered rescue squads for purposes of definition under this plan and interpretation of FCC rules. Licensure on 155.160 or 155.220 MHz shall not affect the eligibility of an organization for further Special Emergency Radio Service frequencies under FCC §90.37(b).

Bases: Any search and rescue organization in the state meeting the above conditions shall be eligible to obtain base station authorization from the FCC on the frequencies 155.160 and 155.220 MHz, subject to applicable FCC Rules and Regulations.

Mobile: Any search and rescue organization in the state meeting the above conditions shall be eligible to obtain mobile-only authorization from the FCC on the frequencies 155.160 and 155.220 MHz or include mobile authorization under a base station license, subject to applicable FCC Rules and Regulations.

USAGE

The Montana search and rescue common frequencies are established primarily for interagency search and rescue communications. Intra-agency use is allowed on a secondary basis when it does not interfere with interagency communications.

MONTANA MUTUAL AID RADIO
Policies and Procedures

Law Enforcement Frequencies

Preface

This document establishes policies and procedures for the use of Montana's law enforcement mutual aid radio frequencies. The Montana Department of Administration is vested with authority to develop and maintain a land mobile public safety radio frequency utilization plan, including these policies and procedures (MCA 2-17-312).

Two frequencies are established for law enforcement use:

155.475 MHz - BLUE - National Law Enforcement Emergency
155.790 MHz - SILVER - State Law Enforcement Mutual Aid

Policies and procedures for these two are covered here. A third frequency is established for general public safety use, including law enforcement:

153.905 MHz - GOLD - State Common Mutual Aid

The color designations are offered here as a simple naming convention for the different channels. They are used in this document where the actual frequency or descriptive name is not needed.

Oversight

A council consisting of one representative from each of the following organizations provides oversight for law enforcement mutual aid radio to the Department of Administration:

Montana Sheriffs and Peace Officers Association
Montana Association of Chiefs of Police
Montana Highway Patrol

The Montana Highway Patrol is responsible for representing all State of Montana law enforcement users.

A member of the Associated Public Safety Communications Officers, Montana Frequency Advisory Committee, may be seated with the council for technical advice and direction.

Eligibility

The following will be eligible users within Montana.

STATE OF MONTANA

BLUE - The State of Montana, Department of Administration, Information Services Division shall maintain a statewide temporary fixed base and mobile license for this frequency to allow other eligible users mobile and/or temporary base station access by agreement. The State shall maintain all base station authorizations on this frequency under its name.

SILVER - The State of Montana, Department of Administration, Information Services Division shall maintain a statewide mobile license for this frequency to allow other eligible users mobile access by agreement. It may license base stations on this frequency for state law enforcement agency use.

LAW ENFORCEMENT: Except for federal law enforcement, a police agency must be a licensee in the police or local government radio service in order to be eligible to use this frequency.

BLUE

Bases: Any law enforcement agency in the state meeting the above conditions shall be eligible to obtain base station authorization under the State's license on this frequency, subject to applicable FCC Rules and Regulations. All 24 hour law enforcement communications centers will be encouraged to install bases.

Mobile: Any law enforcement agency may enter into agreement with the State of Montana to be included under their mobile license.

SILVER

Bases: Any law enforcement agency in the state meeting the above conditions and having a BLUE base station installed shall be eligible to license a base station on this frequency, subject to applicable FCC Rules and Regulations.

Mobile: Any law enforcement agency in the state meeting the above conditions shall be eligible to obtain a mobile license on this frequency, subject to applicable FCC Rules and Regulations. Any law enforcement agency unlicensed on this frequency may alternately enter into agreement with the State of Montana to be included under their mobile-only license.

OTHERS: Non-police agencies may maintain mobile radios on law enforcement mutual aid frequencies only as established here and only for emergency communications as outlined under the "Operational Procedures" section of this document. Under no circumstances may they have base stations on these frequencies.

Ambulances: An ambulance may enter into agreement with the State of Montana to be included under their mobile license for use statewide of the BLUE channel.

Buses: A school or community bus service provider may enter into agreement with the State of Montana for statewide mobile use of the BLUE channel in their buses. Access must be approved by the sheriff within the service's base county of operation.

Licensing and Authorization

Authority for use of the Montana law enforcement mutual aid frequencies is obtained through licensure with the FCC and by agreement with the Department of Administration. The differing procedures for the BLUE and SILVER frequencies are covered here.

BLUE (155.475 MHz) - Base station and mobile use of this frequency is authorized by agreement with the Department of Administration. An agency interested in using it may request authorization by letter. Figure 1 on the next page is a sample base station request. Figure 2 is a sample mobile agreement request. These samples contain information necessary for the agreement to be issued.

SILVER (155.790 MHz) - Mobile use of this frequency may be authorized by agreement with the Department of Administration. Figure 2 is a sample mobile agreement request.

Base and/or mobile licensing with the FCC may alternately be pursued by individual agencies. Forms required for licensing are available from the Information Services Division and can be returned to that location for forwarding to the Montana Frequency Advisory Committee (MFAC).

MFAC will review the application for conformity with these policies and procedures, and may recommend changes to limit range or harmful interference potential. The oversight council established herein shall arbitrate when MFAC and the applicant agency cannot come to agreement.

As established under Eligibility above, only agencies with a base on the BLUE frequency may license a base on this frequency.

20 SEP 89

Public Safety Radio
Department of Administration
Mitchell Building - Room 219
Helena, MT 59620

Dear Folks:

We, the [**AGENCY NAME**], are requesting authorization to install a fixed base station on the National Law Enforcement Emergency Frequency, 155.475 MHz. Transmitter site details and technical parameters are as follows:

Location: _____[descriptive name]_____

Output Power: _____ watts

Antenna Gain: _____ db

Effective
Radiated Power: _____ watts

Antenna Hgt to Tip _____ ft
(above ground)

Geographic Coordinates:

Latitude: ___-___-___

Longitude: ___-___-___

Elevation (ft) _____

Estimated Area Covered:
_____
_____

Primary Control Point _____

(street address
and phone no.) _____

_____

We agree to abide by all FCC regulations as well as policies and procedures developed by the State of Montana for the use of this frequency. It is understood that alternate location and technical parameter suggestions may be made by the Department of Administration. We agree to keep the Department of Administration informed, as the FCC licensee, of any planned changes in the location or technical parameters of the transmitter or any permanent deactivation of it.

Sincerely,

[AGENCY ADMINISTRATOR]

FIGURE 1 - Base Station Request (BLUE)

20 SEP 89

Public Safety Radio
Department of Administration
Mitchell Building - Room 219
Helena, MT 59620

Dear Folks:

The [**AGENCY NAME**], is requesting authorization to install the following Montana mutual aid radio frequency(s) in mobile radios under its control:

[155.475 MHz - **BLUE** - National Law Enforcement Emergency

and/or

155.790 MHz - **SILVER** - State Law Enforcement Mutual Aid]

The frequency(s) will be placed in a total of _____ mobile and portable radios. The Department of Administration will be notified of any needed increase in this number.

We agree to abide by all policies and procedures developed for the use of this frequency by the State of Montana as well as by FCC regulations.

Sincerely,

[AGENCY ADMINISTRATOR]

FIGURE 2 - Mobile Agreement Request (BLUE or SILVER)

Operations

The following operational requirements and procedures are established to make most effective use of the Montana law enforcement mutual aid frequencies. These frequencies are intended for law enforcement interagency communications. Allowances for other users are made only for emergency contact with law enforcement agencies or officers.

The phrase "letter of authorization" as used in this section is meant to include any formal agreement adopted by the Department of Administration for use with mutual aid radio frequencies. Nothing in this section should be construed as prohibiting the installation of any frequency for receive-only operations (monitoring).

REQUIREMENTS

Police agencies seeking to use the Montana law enforcement mutual aid frequencies must meet FCC eligibility requirements:

> *FCC §90.19(a) - Eligibility. Any territory, possession, state, county, city, town, and similar governmental entity including a governmental institution authorized by law to provide its own police protection, is eligible to hold authorizations in the Police Radio Service to operate radio stations for transmission of communications essential to official police activities of the licensee.*

Police agencies seeking to install a base station on the BLUE frequency must have a letter of authorization from the Department of Administration and post a copy of the State's FCC license covering the installation as required by FCC §90.437 before commencing operations. Agencies are bound by agreement to all applicable FCC rules and regulations.

Police agencies seeking to install a base station on the SILVER frequency must have an FCC license authorizing such installation before commencing operations. Agencies are bound by law to all applicable FCC rules and regulations. Installation of a base station on the BLUE frequency is required before license applications for this frequency will be approved by state authorities.

Police agencies seeking to use either the BLUE or SILVER channel in mobile radios must provide an accurate estimate of the number of intended installations and must receive a letter of authorization from the Department of Administration before commencing operations. Alternately, an agency may license its own mobile use of the SILVER frequency directly with the FCC.

Ambulance services seeking to use the BLUE channel must be licensed as such by the Montana EMS Bureau. Access to this channel is provided for ambulance services that cross multiple law enforcement jurisdictions and have a large geographic responsibility. It is neither intended for all EMS providers nor as a substitute for local operational channels.

Bus services seeking to use the BLUE channel must be providers of student or community transportation for recognized Montana school districts, colleges, universities, or local government entities. Access to this channel is provided for bus services to contact law enforcement agencies or officers with emergency communications, only. Access must be approved by the sheriff within the bus service's base county of operation.

PROCEDURES

Different uses are intended for each of the mutual aid frequencies.

The BLUE channel is for emergency communications and initial contact on more routine matters. Short, infrequent transmissions make it most available for sudden emergency traffic. It must be monitored widely to be of most value.

The SILVER channel is for dispatch-to-dispatch communications and tactical operations. Overlapping coverage and interference to some degree is anticipated. It is a shared operational resource between law enforcement agencies.

Priority Use Levels: Five priority use levels are established. Higher priority communications take precedent over lower.

1. *Immediate Peril - An immediate threat to human life exists*
2. *Disaster or Extreme Emergency - An imminent threat to human life or of large-scale property destruction exists*
3. *Routine Emergency - Distinguished from the above by scale or nearness of threat*
4. *Urgent Administrative or Itinerant*
5. *Training and Drills*

Permissible Uses: Three usage classes are charted below with their permissibility - all communications are considered two-way.

	Base - Mobile	*Base - Base*	*Mobile - Mobile*
BLUE	*YES*	*NO*	*YES*
SILVER	*YES*	*YES*	*YES (secondary)*

Clear Text: The use of clear text is encouraged for all mutual aid frequencies. The use of codes, signals, and call numbers are discouraged for interoperability reasons. Functional or mnemonic names for radio frequencies are encouraged; the use of channel numbers ('channel 1', 'channel 2', etc.) leads to confusion in interagency communications.

Frequency Monitoring: Users of any mutual aid frequency are required to monitor the frequency prior to transmitting to detect higher priority traffic. When need be, an "EMERGENCY TRAFFIC" interruption or "EMERGENCY TRAFFIC ONLY" broadcast can be made.

Agencies with BLUE base stations installed must monitor the frequency at all times their facility is operational. A separate receiver for this frequency is encouraged to prevent other traffic or transmissions from covering it. Mobile monitoring of the channel at all times by all users is encouraged, as well.

Itinerant Services: All users of these frequencies must render service to itinerant vehicles on the frequencies as such traffic relates to the provision of public safety.

DTMF Encoding: The following plan is provided for the common use of DTMF encoding on SILVER base stations. Encoding is an option some agencies may consider to reduce extraneous traffic in their communications centers.

DTMF Codes - Suggested codes consist of three digits, the first two being the county number as used on vehicle license plates and the last being a intra-county selector. The last digit is also used for group call selection. Agencies employing this form of muting should allow receiver selection by their individual, county all-call, regional all-call, and state all-call codes. Leading zeroes (0) must be used.

000	-	*State All-Call*
0nn	-	*Regional All-Call (see note below)*
nn0	-	*County All-Call*
nn1,nn2	-	*County Sheriff (within county nn)*
nn3,nn4,nn5	-	*City Police Codes (within county nn)*
nn6	-	*Fish, Wildlife, and Parks*
nn7	-	*Montana Highway Patrol*

Regional codes will be issued as requested by the Information Services Division. Agencies are asked to request assignment of regional codes as needed to guarantee a common plan across the state. Codes in use will be published by the Information Service Division.

Example: Possible Yellowstone County DTMF codes

031 - Yellowstone Co. SO
032 - Yellowstone Co. SO Jail
033 - Billings Police Department
034 - Laurel Police Department
036 - Fish, Wildlife, and Parks Billings office
037 - Montana Highway Patrol Billings office

Each agency in the county should also consider including the following codes:

000 - State All-Call
001 - Regional All-Call (Yellowstone and surrounding counties - example only)
030 - County All-Call

Discipline

The policies and procedures established here, combined with the FCC Rules and Regulations: Part 90, compose the usage guidelines for the Montana law enforcement mutual aid radio frequencies. Failure to abide by these policies and procedures could result in the removal of authority to operate on any mutual aid frequency.

The Department of Administration's law enforcement mutual aid radio oversight council shall be vested with authority to deal with complaints of abuse brought before it.

MONTANA MUTUAL AID RADIO
Policies and Procedures

Fire Frequencies

Preface

This document establishes policies and procedures for the use of Montana's fire mutual aid radio frequencies. The Montana Department of Administration is vested with authority to develop and maintain a land mobile public safety radio frequency utilization plan, including these policies and procedures (MCA 2-17-312).

Four frequencies are established for fire service use:

154.070 MHz - RED - State Fire Mutual Aid
154.280 MHz - MAROON - State Fire Command and Control
154.265 MHz - CORAL - State Fire Ground #1
154.295 MHz - SCARLET - State Fire Ground #2

Policies for these frequencies are covered here. A fifth frequency is established for general public safety use, including for the fire services:

153.905 MHz - GOLD - State Common Mutual Aid

The color designations are offered here as a simple naming convention for the different channels. They are used in this document where the actual frequency or descriptive name is not needed.

Oversight

A council consisting of representatives as indicated from each of the following organizations/agencies provides oversight for fire mutual aid radio to the Department of Administration:

Department of State Lands, Fire Management Bureau	*- one person*
Department of Justice, Fire Marshal Bureau	*- one person*
University System, Fire Services Training School	*- one person*
Montana State Volunteer Firefighters Association	*- two persons*
Montana Fire Chiefs Association	*- two persons*

A member of the Associated Public Safety Communications Officers, Montana Frequency Advisory Committee, may be seated with the council for technical advice and direction.

Eligibility

The following will be eligible users within Montana.

STATE OF MONTANA

MAROON

Bases: The State of Montana, Department of Administration, Information Services Division shall maintain a statewide temporary fixed base license for this frequency to allow other eligible users temporary base station access by agreement.

Mobile: The State of Montana, Department of Administration, Information Services Division shall maintain a statewide mobile license for this frequency to allow other eligible users mobile access by agreement.

RED, CORAL, AND SCARLET

Bases: Permanent base stations are expressly prohibited.

Mobile: The State of Montana, Department of Administration, Information Services Division shall maintain statewide mobile licenses for these frequencies to allow other eligible users mobile access by agreement.

FIRE SERVICES: Except for federal entities, a fire protection organization or agency must be a licensee in the fire or local government FCC service in order to be eligible to use these frequencies.

MAROON

Bases: Any fire service entity in the state meeting the above conditions shall be eligible to obtain base station authorization on this frequency, subject to applicable FCC Rules and Regulations.

Mobile: Any fire service entity in the state meeting the above conditions shall be eligible to enter into agreement with the State of Montana to be included under their mobile license. Entities licensing bases on this frequency may alternately include their own mobiles under that license.

RED, CORAL, AND SCARLET

Bases: Base station licensing after November 1, 1989 on these frequencies is expressly prohibited.

Mobile: Any law enforcement agency may enter into agreement with the State of Montana to be included under their mobile-only license.

Licensing and Authorization

Authority for use of the Montana fire mutual aid frequencies is obtained through licensure with the FCC and by agreement with the Department of Administration. The differing procedures for the MAROON, RED, CORAL, and SCARLET frequencies are covered here.

MAROON (154.280 MHz) - Temporary base station and mobile use of this frequency is authorized by agreement with the Department of Administration. An agency interested in using it may request authorization by letter. Figure 1 on the next page is a sample temporary base station request. Figure 2 is a sample mobile agreement request. These samples contain information necessary for the agreement to be issued.

Permanent base stations and associated mobiles may be licensed directly with the FCC. Such licensing is for intersystems operations only and these operations must be primarily base-mobile communications (FCC 90.21c2). Assignment is on a non-exclusive basis and any number of agencies may be licensed within a given geographical area.

RED, CORAL, SCARLET (154.070, 154.265, 154.295, respectively) - Mobile use of these frequencies may be authorized by agreement with the Department of Administration. Figure 2 is a sample mobile agreement request.

Direct base and/or mobile licensing by individual entities will not be allowed after November 1, 1989.

1 NOV 89

Public Safety Radio
Department of Administration
Mitchell Building - Room 219
Helena, MT 59620

Dear Folks:

We, the [AGENCY NAME], are requesting authorization to install a temporary fixed base station on the State Fire Command and Control Frequency, 154.280 MHz. Transmitter site details and technical parameters are as follows:

Location: _____[descriptive name]_____ Geographic Coordinates:

Output Power: _____ watts Latitude: ___-___-___

Antenna Gain: _____ db Longitude: ___-___-___

Effective Radiated Power: _____ watts Elevation (ft) _____

Antenna Hgt to Tip (above ground) _____ ft Estimated Area Covered: _____ _____

Primary Control Point _____

(street address and phone no.) _____ _____

Incident Name _____

Anticipated Dates of Need From: _____ (mm/dd/yy) To: _____ (mm/dd/yy)

We agree to abide by all FCC regulations as well as policies and procedures developed by the State of Montana for the use of this frequency. It is understood that alternate location and technical parameter suggestions may be made by the Department of Administration. We agree to contact the Department of Administration, as the FCC licensee, before making any changes in the location or technical parameters of the transmitter and upon deactivation of it.

Sincerely,

FIGURE 1 - Temporary Base Station Request (MAROON)

1 NOV 89

Public Safety Radio
Department of Administration
Mitchell Building - Room 219
Helena, MT 59620

Dear Folks:

The [**AGENCY NAME**], is requesting authorization to install the following Montana mutual aid radio frequency(s) in mobile radios under its control:

[154.070 MHz - **REO** - State Fire Mutual Aid

and/or

154.265 MHz - **CORAL** - State Fire Ground #1

and/or

154.280 MHz - **MAROON** - State Fire Command and Control

and/or

154.295 MHz - **SCARLET** - State Fire Ground #2]

The frequency(s) will be placed in a total of _____ mobile and portable radios. The Department of Administration will be notified of any needed increase in this number.

We agree to abide by all policies and procedures developed for the use of mutual aid radio frequencies by the State of Montana as well as by all applicable FCC regulations.

Sincerely,

[AGENCY ADMINISTRATOR]

FIGURE 2 - Mobile Agreement Request (fire mutual aid)

Operations

The following operational requirements and procedures are established to make most effective use of the Montana fire mutual aid frequencies. These frequencies are intended for fire interagency communications.

The phrase "letter of authorization" as used in this section is meant to include any formal agreement adopted by the Department of Administration for use with mutual aid radio frequencies. Nothing in this section should be construed as prohibiting the installation of any frequency for receive-only operations (monitoring).

REQUIREMENTS

Fire organizations or agencies seeking to use the Montana fire mutual aid frequencies must meet FCC eligibility requirements:

> *FCC §90.21(a) - Eligibility. Any territory, possession, state, county, city, town or similar governmental entity, and persons or organizations charged with specific fire protection activities are eligible to hold authorizations in the Fire Radio Service to operate radio stations for transmission of communications essential to official fire activities of the licensee. Applications from persons or organizations other than governmental entities must be accompanied by a statement from the governmental entity having legal jurisdiction over the area to be served, supporting the request.*

*Fire service entities seeking to install a base station on the **MAROON** frequency must have an FCC license authorizing such installation before commencing operations. Licensees are bound by law to all applicable FCC rules and regulations.*

*Fire service entities seeking to use the **MAROON** channel in mobile radios must either obtain their own license or enter into agreement with the Department of Administration. In the latter case, an accurate estimate of the number of installations must be provided and a letter of authorization received before operations are commenced.*

*Fire service entities seeking to use the **RED, CORAL,** or **SCARLET** channel in mobile radios must provide an accurate estimate of the number of intended installations and must receive a letter of authorization from the Department of Administration before commencing operations.*

PROCEDURES

Different uses are intended for each of the mutual aid frequencies. The RED channel is the primary fire tactical channel. It was first designated for mutual aid radio in Montana in 1984 and its use is continued. It should be the first choice for on-scene interagency communications.

The MAROON channel is for interagency dispatch and multi-agency command and control. Its primary use is for base-mobile communications. Overlapping coverage of base stations and interference to some degree is anticipated. It is a shared operational resource between fire organizations.

The CORAL and SCARLET channels are additional secondary fire ground channels. They are available for on-scene interagency communications where incident scope requires additional ground channels.

Priority Use Levels: Five priority use levels are established. Higher priority communications take precedent over lower.

1. *Immediate Peril - An immediate threat to human life exists*
2. *Disaster or Extreme Emergency - An imminent threat to human life or of large-scale property destruction exists*
3. *Routine Emergency - Distinguished from the above by scale or nearness of threat*
4. *Urgent Administrative or Itinerant*
5. *Training and Drills*

Permissible Uses: Three usage classes are charted below with their permissibility - all communications are considered two-way.

	Base - Mobile	Base - Base	Mobile - Mobile
RED	NO	NO	YES
CORAL	NO	NO	YES
SCARLET	NO	NO	YES
MAROON	YES	YES (secondary)	YES (secondary)

Clear Text: The use of clear text is encouraged for all mutual aid frequencies. The use of codes, signals, and call numbers are discouraged for interoperability reasons. Functional or mnemonic names for radio frequencies are encouraged; the use of channel numbers ('channel 1', 'channel 2', etc.) leads to confusion in interagency communications.

Frequency Monitoring: Users of any mutual aid frequency are required to monitor the frequency prior to transmitting to detect higher priority traffic. When need be, an "EMERGENCY TRAFFIC" interruption or "EMERGENCY TRAFFIC ONLY" broadcast can be made.

Agencies with MAROON base stations installed should monitor the frequency at all times their facility is operational. A separate receiver for this frequency is encouraged to prevent other traffic or transmissions from covering it. Mobile monitoring of the channel at all times by all users is encouraged, as well.

Itinerant Services: All users of these frequencies must render service to itinerant vehicles on the frequencies as such traffic relates to the provision of public safety.

Discipline

The policies and procedures established here, combined with the FCC Rules and Regulations: Part 90, compose the usage guidelines for the Montana fire mutual aid radio frequencies. Failure to abide by these policies and procedures could result in the removal of authority to operate on any mutual aid frequency.

The Department of Administration's fire mutual aid radio oversight council shall be vested with authority to deal with complaints of abuse brought before it.

Selected FCC Codes - Part 90: Private Land Mobile Radio Services

§90.1 Basis and purpose. - (a) Basis. The rules in this part are promulgated under Title II of the Communications Act of 1934, as amended, which vests authority in the Federal Communications Commission to regulate radio transmission and to issue licenses for radio stations. All rules in this part are in accordance with applicable treaties and agreements to which the United States is a party.

(b) Purpose. This part states the conditions under which radio communications systems may be licensed and used in the Public Safety, Special Emergency, Industrial, Land Transportation, and Radiolocation Services. These rules do not govern radio systems employed by agencies of the Federal Government.

SUBPART B - Public Safety Radio Services

§90.15 Scope. The Public Safety Radio Services include the Local Government, Police, Fire, Highway Maintenance, and Forestry-Conservation Radio Services. Rules as to eligibility for licensing, frequencies available, and any special requirements as to each of these radio services are set forth in the following sections.

§90.16 Public Safety National Plan. The Commission has established a National Plan which specifies special polices and procedures governing the Public Safety Radio Services and the Special Emergency Radio Service. The National Plan is contained in the Report and Order in Gen. Docket No. 87-112. The principal spectrum resource for the National Plan is the 821-824 MHz and the 866-869 MHz bands. The National Plan establishes planning regions covering all parts of the United States, Puerto Rico and the U.S. Virgin Islands. No assignments will be made in the 821-824 MHz and 866-869 MHz bands until a regional plan for the area has been accepted by the Commission.

§90.17 Local Government Radio Service. (a) Eligibility. Any territory, possession, state, county, town, or similar governmental entity, including a district and an authority, but not including a school district or authority or park district or authority except as provided for in §90.242, is eligible to hold authorizations in the Local Government Radio Service to operate radio stations for transmission of communications essential to official activities of the licensee.

§90.19 Police Radio Service. (a) Eligibility. Any territory, possession, state, county, city, town, and similar governmental entity including a governmental institution authorized by law to provide its own police protection, is eligible to hold authorizations in the Police Radio Service to operate radio stations for transmission of communications essential to official police activities of the licensee.

§90.21 Fire Radio Service. (a) Eligibility. Any territory, possession, state, county, city, town or similar governmental entity, and persons or organizations charged with specific fire protection activities are eligible to hold authorizations in the Fire Radio Service to operate radio stations for transmission of communications essential to official fire activities of the licensee. Applications from persons or organizations other than governmental entities must be accompanied by a statement from the governmental entity having legal jurisdiction over the area to be served, supporting the request.

SUBPART C - Special Emergency Radio Service

§90.33 Scope. The Special Emergency Radio Service covers the licensing of the radio communications of the following categories of activities: medical services, rescue organizations, veterinarians, handicapped persons, disaster relief organizations, school buses, beach patrols, establishments in isolated areas, communications standby facilities, and emergency repair of public communications facilities. Private carriers may also be licensed in the Special Emergency Radio Service solely to provide radio communications service below 800 MHz to any other eligible. Rules as to eligibility for licensing, permissible communications and classes and numbers of stations, and any special requirements as to each of these categories are set forth in the following section. Frequencies available for these categories of services are shown in a separate frequency table.

§90.35 Medical Services. (a) Eligibility. The following persons are eligible to hold authorization to operate radio stations for the delivery or rendition of medical services to the public and on a secondary basis, for transmission of messages related to the efficient administration of organizations and facilities engaged in medical services, operations.

(1) Hospital establishments that offer services, facilities, and beds for use beyond 24 hours of rendering medical treatment.

Selected FCC Codes - Part 90: Private Land Mobile Radio Services

(2) Institutions and organizations regularly engaged in providing medical services through clinics, public health facilities, and similar establishments.

(3) Ambulance companies regularly engaged in providing medical ambulance services.

(4) Rescue organizations for the limited purpose of participation in providing medical services.

(5) Associations comprised of two or more of the organizations eligible under paragraph (a)(1), (2), (3) and (4) of this section, for the purpose of active participation in the direct operational control of the medical services communication activities of such organizations.

(6) Physicians, schools of medicine, oral surgeons, and associations of physicians and oral surgeons.

(7) Governmental entities and governmental agencies for their own medical activities.

(8) Governmental entities and governmental agencies for providing medical services communications to other eligible persons through direct participation in the direct operational control of the system, such as through central dispatch service.

§90.37 Rescue Organizations. (a) Eligibility. Persons or organizations operating a rescue squad are eligible to hold authorizations to operate radio stations for transmission of messages pertaining to the safety of life or property and urgent messages necessary for the rendition of an efficient emergency rescue service.

(b) Class and number of stations available. Each rescue squad will be authorized to operate one base station, and a number of mobile units (excluding hand carried mobile units) not exceeding the number of vehicles actually used in emergency rescue operations. In addition, each rescue squad will be authorized to operate a number of hand carried mobile units not exceeding two such units for each radio equipped vehicle actually used in emergency rescue operations.

§90.41 Disaster relief organizations. (a) Eligibility. Organizations established for disaster relief purposes having an emergency radio communications plan are eligible to hold authorizations to operate radio stations for the transmission of communications relating to the safety of life or property, the establishment and maintenance of temporary relief facilities, and the alleviation of the emergency situation during periods of actual or impending emergency, or disaster, and until substantially normal conditions are restored.

SUBPART N - Operating Requirements

§90.401 Scope. The subpart describes general operating requirements for stations licensed under this part. This includes station operating procedures, points of communication, permissible communications, methods of station identification, control requirements, and station recordkeeping requirements.

§90.403 General operating requirements. (a) Licensees of radio stations in the private land mobile radio services shall be directly responsible for the proper operation and use of each transmitter for which they are licensed. In this connection, licensees shall exercise such direction and control as is necessary to assure that all authorized facilities are employed:

(1) Only for permissible purposes;

(2) Only in a permissible manner; and

(3) Only by persons with authority to use and operate such equipment.

(b) In carrying out their responsibilities under §90.403(a), licensees shall be bound by the provisions of the Communications Act of 1934, as amended, and by the rules and regulations of the Commission governing the radio service in which their facilities are licensed; and licensees may not, through written or oral agreements or otherwise, relieve themselves of any duty or obligation imposed upon them, by law, as licensees.

(c) Each licensee shall restrict all transmissions to the minimum practicable transmission time and shall employ an efficient operating procedure designed to maximize the utilization of the spectrum.

(d) Communications involving the imminent safety-of-life or property are to be afforded priority by all licensees.

(e) Licensees shall take reasonable precautions to avoid causing harmful interference. This includes monitoring the transmitting frequency for communications in progress and such other measures as may be necessary to minimize the potential for causing interference.

§90.405 Permissible communications. (a) Stations licensed under this part may transmit only the following types of communication:

(1) Any communication related directly to the imminent safety of life or property;

Selected FCC Codes - Part 90: Private Land Mobile Radio Services

(2) Communications directly related and necessary to those activities which make the licensee eligible for the station license held under this part. In addition, when communication service is provided under the cooperative sharing provisions of §90.179, the licensee providing such service may transmit communications related to the activities for which the parties receiving the service would be eligible to be licensed.

*§90.407 **Emergency communications.** The licensee of any station authorized under this part may, during a period of emergency in which the normal communication facilities are disrupted as a result of hurricane, flood, earthquake or similar disaster, utilize such station for emergency communications in a manner other than that specified in the station authorization or in the rules and regulations governing the operation of such stations. The Commission may at any time order the discontinuance of such special use of the authorized facilities.*

*§90.411 **Civil defense communications.** The licensee of any station authorized under this part may, on a voluntary basis, transmit, communications necessary for the implementation of civil defense activities assigned such station by local civil defense authorities during an actual or simulated emergency, including drills and tests. The Commission may at any time order the discontinuance of such special use of the authorized facilities.*

*§90.417 **Interstations communication.** (a) Any station licensed under this part may communicate with any other station without restriction as to type, service, or licensee when the communications involved relate directly to the imminent safety of life or property.*

(b) Any station licensed under this part may communicate with any other station licensed under this part, with U.S. Government stations, and with foreign stations, in connection with mutual activities, provided that where the communication involves foreign stations prior approval of the Commission must be obtained, and such communication must be permitted by the government that authorizes the foreign station. Communications by Police Radio Service stations with foreign stations will be approved only to be conducted in accordance with article 5 of the Inter-American Radio Agreement, Washington, D.C., 1949, the provisions of which are set forth in §90.19(c).

*§90.419 **Points of communications.** Normally operations licensed under this part are intended to provide intrastation mobile communications. For example, a base station is intended to communicate with its associated mobile stations and mobile stations are intended to communicate between associated mobile stations and associated base stations of the licensee.. Accordingly, operations between base stations at fixed locations are permitted only in the following situations:*

(a) Base stations licensed in the Public Safety and Special Emergency Radio Services may communicate with other base stations, operational fixed stations, or fixed receivers authorized in these services on frequencies below 450 MHz only on a secondary basis.

*§90.421 **Operation of mobile units in vehicles not under control of the licensee.** Mobile station transmitters may be installed in vehicles operated by persons other than the licensee as provided in the following paragraphs when necessary for the licensee to meet his requirements in connection with the activities for which he is licensed. The number of units so installed, together with units installed in vehicles operated by the licensee, must not exceed the number of mobile units authorized to the licensee. When an insufficient number of units is licensed to cover such additional units, the license must be modified to add a sufficient number of mobile units. The licensee is responsible for taking any necessary precaution to effectively eliminate the possibility of unauthorized operation of transmitters when not under the control of the licensee.*

(a) Mobile units licensed in the Local Government Radio Service may be installed in any vehicle which in an emergency would require cooperation and coordination with the licensee, and in any vehicle used in the performance, under contract, of official activities of the licensee. This includes ambulances, emergency units of public utilities, lifeguard units, and vehicles of contractors or other persons or agencies performing for the licensee under contract one or more of its local government functions. This provision does not permit the installation of radio units in non-emergency vehicles not performing governmental functions under contract but with which the licensee might wish to communicate.

(b) Mobile units licensed in the Fire Radio Service may be installed in any vehicle which may be alerted during a fire emergency. This includes emergency units of public utilities and water departments.

Selected FCC Codes - Part 90: Private Land Mobile Radio Services

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(f) Mobile units licensed in the medical services category of the Special Emergency Radio Service may be installed in the vehicle or be hand-carried for use by any person with whom cooperation or coordination is required for medical services activities.

§90.437 Posting station licenses. (a) The current original authorization for each station shall be retained as a permanent part of the station records but need not be posted.

(b) A clearly legible photocopy of the authorization for each base or fixed location shall be posted at every control point of the station.

Sample Interagency Agreement

The Monroe County Sheriffs Office hereby gives authorization to the Pleasantville Police Department to use the frequency 155.010 MHz under the FCC licensed call sign WSPL429. Installation for transmission purposes is limited to 15 mobile units under the immediate control of PPD. Use is limited to communications with base or mobile units of the Monroe County Sheriffs Office in furtherance of the official duties of each agency.

Transmitter power and area of use are limited as follows:

Transmitter Output Power: 100 watts

Area of Operation: Town of Pleasantville

By Authority of:

[Chief Administrator of Licensed Agency]
signature

Items of Note: The agency or organization giving authorization must be the one whose name the license is actually in. In the above example, the sheriffs office would have no authority to grant access to the frequency if it was licensed in Monroe County's name, specifically.

A licensee can generally give authorization for another agency to use its licensed frequency for communications with itself, the licensee. This should be specified in the agreement.

The entity receiving authorization is limited by law to all restrictions the license holder itself is under. It is important that the license holder specify those restrictions, typically power output and area of operation for mobile radios. The licensee has every authority to further limit use. For example, Pleasantville Police Department is only allowed to use the frequency within the town. The sheriffs office would likely be licensed countywide or for a given radius around a central base station.

Authority should be given in the name of the chief executive or administrator of the licensed entity.

Mutual Aid Frequencies

Frequency	Color	Usage
155.475 MHz	BLUE	National Law Enforcement Emergency
155.790	SILVER	State Law Enforcement Mutual Aid
153.905	GOLD	State Common Mutual Aid
154.070	RED	State Fire Mutual Aid
154.280	MAROON	State Fire Command and Control
154.265	CORAL	State Fire Ground #1
154.295	SCARLET	State Fire Ground #2

Common Frequencies

Frequency	Color	Usage
155.820 MHz	BROWN	State DES Direction and Control
155.160	VIOLET	National Search and Rescue
155.220	PURPLE	State Search and Rescue
155.280	WHITE	State Local Hospital to Ambulance
155.340	TAN	State Regional Hospital to Ambulance
155.325	GRAY	EMS Central Region Dispatch & Paging
155.385	PINK	EMS East/West Region Dispatch & Paging
151.220	YELLOW	State Forestry - Department of State Lands
171.475	GREEN	U.S. Forest Service Common

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